

NWO

From: McMahon, John R BG NWD
Sent: Sunday, May 01, 2011 3:54 PM
To: Anderson, G Witt NWD; Farhat, Jody S NWD02; Blechinger, Erik T NWO; [REDACTED] NWD
Cc: [REDACTED] NWD; Tipton, Robert A Col NWD
Subject: Fw: Recommendation from the District Commander Reagrding Operation of the Floodway (UNCLASSIFIED)

This is getting serious.

----- Original Message -----

From: Walsh, Michael J MG MVD
To: Van Antwerp, Robert L LTG HQ02; Temple, Bo M MG HQ02; Grisoli, William T MG HQ02; [REDACTED] HQ02
Cc: Peabody, John W MG LRDOR; McMahon, John R BG NWD; [REDACTED] HQ02; Grisoli, William T MG HQ02; [REDACTED] HQ02; [REDACTED] MVD; [REDACTED] MVD; [REDACTED] LRP; [REDACTED] MVD; Mary.E.Landry@uscg.mil <Mary.E.Landry@uscg.mil>; Price, Michael J COL MVP; McGinley, Shawn COL MVR; O'Hara, Tom E COL MVS; Reichling, Vernie L COL MVM; Eckstein, Jeffrey R Col MVK; Fleming, Edward R COL MVN; Sinkler, Robert A COL MVN
Sent: Sun May 01 13:50:36 2011
Subject: Recommendation from the District Commander Reagrding Operation of the Floodway (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: NONE

Sir,

1536 hrs

Just completed a decision brief from Col. Reichling regarding operation of the floodway. Taking into account all the hydraulic and engineering information available the District Commander recommends we move from H-24 to H-3. That means break down the barges and move to levee and load the pipes with slurry.

I approved his recommendation. It will take about three hours to position the tow and 18 hours to load the pipes.

The next decision point will be for ERDC to Arm and operated.

Vr,

Mike

I talked personally with both Governor about this decision.

Classification: UNCLASSIFIED

Caveats: NONE

NWO

From: [REDACTED] NWO
Sent: Saturday, April 30, 2011 4:03 PM
To: DLL-CENWO-EOC CMT-ALL
Subject: FW: National Flood Fight Talking Points -- 30 April (UNCLASSIFIED)
Attachments: 2011 flooding talking points - as of 1600 hrs 30 Apr 11.docx

Classification: UNCLASSIFIED

Caveats: NONE

CMT,

An update to support operations. The District is sending four personnel [REDACTED] and [REDACTED] to Alabama to provide a mission assessment for a week. Conditions are rough down there right now and lodging, rental cars, and gas are hard to find. The team will be flying into Nashville and driving down in order to help alleviate the issues stated above. We will continue to keep you all updated. [REDACTED] (Debris SME) is also deploying tomorrow to support the effort.

Attached are updated flood talking points.

Thanks,

[REDACTED] Thomas
Chief, Readiness Branch
U.S. Army Corps of Engineers - Omaha District
1616 Capitol Ave., Ste 9000
Omaha, NE 68102
[REDACTED] Office
[REDACTED] Blackberry
[REDACTED]@usace.army.mil

-----Original Message-----

From: Oldham, Margaret NWO
Sent: Saturday, April 30, 2011 3:59 PM
To: Williamson, Eileen L NWO; Wingert, Kevin M NWO; Farmer, Monique L NWO; Quinn, Kevin R NWO; Thomas, Kimberly S NWO
Subject: Fw: National Flood Fight Talking Points -- 30 April (UNCLASSIFIED)

Updated talking points from HQ

----- Original Message -----

From: [REDACTED] HQ02
To: [REDACTED] HQ02; CDL-All-Public-Affairs-Division-Chiefs; CDL-All-Public-Affairs-District-Chiefs; [REDACTED] HQ02; [REDACTED] HQ02; [REDACTED] HQ02; MVD
Cc: [REDACTED] MVD; [REDACTED] HQ02; [REDACTED] HQ02; [REDACTED] HQ02; [REDACTED] HQ02; [REDACTED] HQ02; [REDACTED] HQ02
Sent: Sat Apr 30 13:44:45 2011
Subject: National Flood Fight Talking Points -- 30 April (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: NONE

All:

Attached are updated talking points as of 1600 - Saturday, 30 April.

Vr,

Scott Harris
Public Affairs Specialist
Headquarters, U.S. Army Corps of Engineers
202-761-1806

Classification: UNCLASSIFIED
Caveats: NONE

Classification: UNCLASSIFIED
Caveats: NONE

Talking Points – April 2011 Flood Fighting Effort

(as of 1600 hrs, 30 April 2011)

GENERAL PROGRAM INFORMATION

- Public safety is the number one goal of the USACE Flood Risk Management Program.
- USACE executes an annual \$1.6 billion Flood Risk Management program of coastal and riverine projects centered around a watershed, life cycle approach of preparation, response, recovery, and mitigation.
- We recognize that managing and communicating flood risk is a shared responsibility among federal, state, local, and private partners so individuals can make well informed public decisions about their safety.
- Public Law 84-99, Flood Control and Coastal Emergency Act, gives the Corps specific authorities to conduct preparedness, response, recovery, and rehabilitation activities.
- USACE provides disaster support to the nation: by our inherent Civil Works authorities for reservoir and dam / lock operations, Public Law 84-99 (Flood Control Act of 1941), by support to the Department of Homeland Security / Federal Emergency Management Agency, under the National Response Framework, and pursuant to the Stafford Act (Public Law 93-288), and support to the Department of Defense: domestic support to NORTHCOM and ARNORTH, overseas operations in Iraq and Afghanistan, and provision of field force engineering.
- In coordination with States, the Corps deploys flood fighting materials and supplies (sandbags, pumps, and expedient flood fight products), pre-positions flood flight supplies and equipment, and deploys flood engineers to provide technical assistance.

CURRENT FLOOD FIGHT

- Hundreds of engineers and technicians from the Mississippi Valley, Lakes and Rivers and Northwestern Divisions, along with scientists from the Corps' Engineer Research and Development Center, are working around the clock to combat flooding stemming from historic Mississippi River levels.
- The system is performing as designed, however, with the unprecedented level of river stages and huge pressures, some areas along the levee system are experiencing seepage. Engineers and local levee boards are fighting the seepage and flood-fighting teams are closely monitoring and taking all necessary action to ensure the integrity of the system.
- Along with FEMA and our State and local partners, we are actively engaged in fighting the effects of spring flooding at Devils Lake, ND and along the Red, Souris, James, Mississippi, Missouri, Cumberland, Big Sioux, and Ohio Rivers and have spent, within our authorities, more than \$30 million of emergency funds for flood fighting materials and equipment, field investigations, monitoring levees, emergency contracting, and technical assistance.
- This is the third consecutive year where widespread and record flooding has occurred within the North Central United States.
- Currently, Corps water management officials are coordinating closely with state, local, private, and interagency partners along the Mississippi and Ohio Rivers to manage reservoirs and execute operations to reduce the risk of flooding to the greatest extent possible.
- The Mississippi River Commission, the Corps' Mississippi Valley Division, and the Corps' Memphis District are coordinating closely with other governmental agencies, communities and stakeholders to monitor conditions and execute prudent actions for potentially operating the Birds Point-New Madrid Floodway.
- As always, residents who live and work near flood-impacted levees should remain vigilant and must be prepared to follow directions from their local emergency management officials.

NWO

From: Farhat, Jody S NWD02
Sent: Sunday, May 01, 2011 6:07 PM
To: McMahon, John R BG NWD; Anderson, G Witt NWD; [REDACTED] NWK; [REDACTED] NWK; [REDACTED] NWD02; [REDACTED] NWD02
Subject: Fw: NOTES: Lower Ohio / Mississippi River Flood Coordination Call - Sunday May 1, 1400 ET / 1300 CT (UNCLASSIFIED)

Sir - see summary of Mississippi WM call today. The Cairo forecast is a foot higher today than yesterday due to forecast rain; forecast now shows 9 days over 60 feet and 5 days over 61 feet. Releases at Gavins remain at 45 kcfs. Releases at Truman are scheduled to be increased from 0 to 21 kcfs tomorrow afternoon. We'll ask NWK to take a hard look at it tomorrow to see if it may be possible to hold off a bit longer, however rain is forecast in Missouri too.

Jody

----- Original Message -----

From: Moyer, Robert E LRDOR
To: [REDACTED] LRDOR; DLL-CELRD-WM Lower Ohio-Miss Coordination; 'bruce.terry@noaa.gov' <bruce.terry@noaa.gov>; 'sr-tua.all@noaa.gov' <sr-tua.all@noaa.gov>; [REDACTED] SWD; 'Noreen.Schwein@noaa.gov' <Noreen.Schwein@noaa.gov>; 'Wendy.Pearson@noaa.gov' <Wendy.Pearson@noaa.gov>; 'Kris.Lander@noaa.gov' <Kris.Lander@noaa.gov>; [REDACTED]
NWD02
Sent: Sun May 01 15:47:46 2011
Subject: NOTES: Lower Ohio / Mississippi River Flood Coordination Call - Sunday May 1, 1400 ET / 1300 CT (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Agencies Represented:

National Weather Service:

- Hydrometeorological Prediction Center (HPC)
- Ohio RFC (OHRFC)
- Lower Mississippi RFC (LMRFC)
- North Central RFC (NCRFC)
- Arkansas Basin RFC (ABRFC)

US Army Corps of Engineers:

- Great Lakes & Ohio River Division (LRD - Cincinnati)
- Mississippi Valley Division (MVD)
- Northwestern Division - Missouri Basin (NWD)
- Southwestern Division (SWD)
- Memphis District (MVM)
- St. Louis District (MVS)
- Nashville District (LRN)
- Vicksburg District (MVK)
- New Orleans District (MVN)

Tennessee Valley Authority:

- River Scheduling / Lead Engineer

1. National Weather Service Briefings

OHRFC: Smithland crest of 1090 kcfs. 48 hours rain = 1100 kcfs. 5-days rain = 1123 kcfs

NCRFC: Chester 709 kcfs (24 hour QPF). 5-days no large difference. Down to 460 kcfs in 10 days.

LMRFC: The public crest is 61.5 feet on 4 May. Paducah at 54 feet on 4 May. 56 at brookport and 62 and Grand Chain. Cairo to reach 60 feet in short order. 9 Days over 60 feet with 5 days over 61 feet. Contingency crest 61.8 feet on 5/7. 10 days over 60' with 5 days over 61'

ABRFC: Rain in SE corner of state with Pine Bluff 315 with most likely scenario; 420 kcfs maximum.

2. TVA / LRN Status and Concerns

LRN: Dale Hollow and JPercy Priest concerns.

TVA: Processing 2 runs at time of call.

3. Mississippi Valley Division and Districts:

MVS: Shut down at Mark Twain, Carlisle will be 70% capacity at the crest. Shelbyville feeds Carlisle and it is shut.

MVM: No new information.

MVK: No additional reports

MVN: Anticipating opening Bonnet Carre spillway. Angola Levees being monitored. Monitoring Natchez

MVD: Monitoring the ongoing situation. Seepage at Fulton County - Cairo, possible overtopping

4. SWD

Monitoring Illinois, White, Black, and Arkansas systems.

5. LRD Water Management Strategy

LRD: Scheduled increases at both Barkley and Kentucky today with the change in the rainfall forecast.

6. Next Call

Next call tomorrow at 1400 ET / 1300 CT.

These calls will continue daily until further notice.

[REDACTED]
Hydraulic Engineer
US Army Corps of Engineers
Great Lakes and Ohio River Division
Office: CELRD-RBW
Phone: ([REDACTED])
Fax: ([REDACTED])

Classification: UNCLASSIFIED

Caveats: NONE

NWO

From: Farhat, Jody S NWD02
Sent: Monday, May 02, 2011 4:47 PM
To: [REDACTED] NWK
Cc: [REDACTED] NWD02; [REDACTED] NWK; [REDACTED] NWD02; Anderson, G Witt NWD
Subject: RE: Truman Releases (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

[REDACTED] - A few notes just to follow up on our phone call: based on the situation on the Mississippi River it would be preferable to keep Truman releases as low as possible this week, caveated on the condition that we do not want to create a significant risk/crisis at Truman. The Mississippi River at Cairo is forecast to crest at 63 feet on the 5th and remain above 60 feet (which is their critical level) for about 8 days. If generating power for SWAPA is the biggest issue, I'd suggest you explain the situation and keep Truman at minimum firm power levels as long as the pool forecast remains manageable. As you noted in our phone call, spillway flows need to be avoided due to construction below the dam, so give yourself some leeway for future rainfall and if it's necessary to start increasing releases sooner than late this week, do what you need to do.

Jody

-----Original Message-----

From: [REDACTED] NWK
Sent: Monday, May 02, 2011 3:40 PM
To: Farhat, Jody S NWD02
Cc: [REDACTED] NWD02; [REDACTED] NWK
Subject: Truman Releases (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Jody,

Hope your days are not too frenzied. Unfortunately, based on e-mails from Sunday afternoon conference calls, it sounds like they may be.

I understand the dynamic and extreme nature of the flooding situation on the Mississippi River and we hope to assist as best we can. Do you have any further information concerning guidance for our Truman Operations from the multi-Divisional calls? We have zeroed out Truman releases on Tuesday (other than SWPA Firm Power) and so far are going day by day. Obviously, we are hoping to resume releases as soon as downstream conditions allow. Our estimated travel time from Truman to Cairo is 7 days.

SWPA will run Firm Power which they are entitled to by our MOU from 1980. This means that they can run two units for two hours (14,000 cfs/hr) which equates to an average daily release of approximately 1200 cfs.

I know this whole situation is constantly shifting. Any information could assist us in coordinating with our stakeholders (mostly SWPA, see below).

Thanks,

Chief, Water Management Section
USACE - Kansas City District

-----Original Message-----

From: Ashley Corker [<mailto:ashley.corker@swpa.gov>]
Sent: Monday, May 02, 2011 11:08 AM
To: [REDACTED] NWK
Cc: Fritha Ohlson; Brad Vickers
Subject: Truman release

Steve,

I got your voicemail about no generation at Truman tomorrow. Will you know about Wednesday's generation today? As I mentioned in our earlier conversation, having even a small amount of generation from Truman would be a tremendous help to us in increasing flexibility on our system. Although Stockton's return to service last Friday helped, we are still constrained there due to the restrictions downstream preventing us from generating at full load for more than 4-5 hours. Everywhere else we are either shut to zero, running full power, or have a specific target to meet. This makes regulation very difficult, and it is only made worse when we are told to increase or cut back generation ASAP (which happened several times yesterday alone).

Also, there's a bit of rain in the forecast over Truman for Thu/Fri. We'd like to avoid any spill there later because we aren't releasing now.

Thanks for your continued help and updates

Ashley

Classification: UNCLASSIFIED
Caveats: NONE

Classification: UNCLASSIFIED
Caveats: NONE

[REDACTED] NWO

From: [REDACTED] NWD
Sent: Monday, May 02, 2011 4:05 PM
To: Farhat, Jody S NWD02
Subject: RE: Letter from State Engineer-State of North Dakota (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: FOUO

Thank you, Jody.

-----Original Message-----

From: Farhat, Jody S NWD02
Sent: Friday, April 29, 2011 2:26 PM
To: [REDACTED] NWD
Cc: [REDACTED] NWD; [REDACTED] NWD02
Subject: RE: Letter from State Engineer-State of North Dakota (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: FOUO

[REDACTED] - we are working on a reply, but want to include the latest information after we update our reservoir forecast next Tuesday, so it will be a few more days before we get the response to you.

Thanks,
Jody

-----Original Message-----

From: [REDACTED] NWD
Sent: Tuesday, April 26, 2011 10:43 AM
To: Farhat, Jody S NWD02
Cc: [REDACTED] NWD
Subject: Letter from State Engineer-State of North Dakota (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: FOUO

Good Morning,

Attached is the subject letter, dated April 20, 2011, concerning "High Missouri River System Reservoir Levels" for your review. The letter was also given to [REDACTED]

Best Regards,

[REDACTED]
[REDACTED]
U.S. Army Corps of Engineers
1125 NW Couch Street, Suite 500
Portland, OR 97209
Ph: [REDACTED]

Attachment Classification: UNCLASSIFIED
Attachment Caveats: NONE

[REDACTED] NWO

From: [REDACTED] NWK
Sent: Monday, May 02, 2011 3:40 PM
To: [REDACTED] NWD02
Cc: [REDACTED] NWD02, [REDACTED] NWK
Subject: Truman Releases (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Jody,

Hope your days are not too frenzied. Unfortunately, based on e-mails from Sunday afternoon conference calls, it sounds like they may be.

I understand the dynamic and extreme nature of the flooding situation on the Mississippi River and we hope to assist as best we can. Do you have any further information concerning guidance for our Truman Operations from the multi-Divisional calls? We have zeroed out Truman releases on Tuesday (other than SWPA Firm Power) and so far are going day by day. Obviously, we are hoping to resume releases as soon as downstream conditions allow. Our estimated travel time from Truman to Cairo is 7 days.

SWPA will run Firm Power which they are entitled to by our MOU from 1980. This means that they can run two units for two hours (14,000 cfs/hr) which equates to an average daily release of approximately 1200 cfs.

I know this whole situation is constantly shifting. Any information could assist us in coordinating with our stakeholders (mostly SWPA, see below).

Thanks,

[REDACTED]
[REDACTED]
[REDACTED] Chief, Water Management Section
USACE - Kansas City District
[REDACTED]

-----Original Message-----

From: Ashley Corker [mailto:ashley.corker@swpa.gov]
Sent: Monday, May 02, 2011 11:08 AM
To: [REDACTED] NWK
Cc: Fritha Ohlson; Brad Vickers
Subject: Truman release

[REDACTED]
I got your voicemail about no generation at Truman tomorrow. Will you know about Wednesday's generation today? As I mentioned in our earlier conversation, having even a small amount of generation from Truman would be a tremendous help to us in increasing flexibility on our system. Although Stockton's return to service last Friday helped, we are still constrained there due to the restrictions downstream preventing us from generating at full load for more than 4-5 hours. Everywhere else we are either shut to zero, running full power, or have a specific target to meet. This makes regulation very difficult, and it is only made worse when

we are told to increase or cut back generation ASAP (which happened several times yesterday alone).

Also, there's a bit of rain in the forecast over Truman for Thu/Fri. We'd like to avoid any spill there later because we aren't releasing now.

Thanks for your continued help and updates

Ashley

Classification: UNCLASSIFIED

Caveats: NONE

[REDACTED] NWO

From: [REDACTED] NWD02
Sent: Monday, May 02, 2011 3:40 PM
To: Farhat, Jody S NWD02; [REDACTED] NWD02; [REDACTED] LD NWD02; [REDACTED] NWD02
Subject: May 1 Service Level Computation (UNCLASSIFIED)
Attachments: Service Level Computation - 1 May 2011.pdf

Classification: UNCLASSIFIED
Caveats: NONE

FYI.

[REDACTED]
Missouri River Basin Water Management,
Northwestern Division, USACE

[REDACTED] (fax)

Classification: UNCLASSIFIED
Caveats: NONE

Service Level Determination
1-May-2011

Mainstem System Storage	65.5 MAF	May 1 Actual System Storage
Forecasted Remaining Runoff Above Gavins thru end of year	22.1 MAF	Total Forecasted ab Gavins for May-Dec (using May 1 forecast)
Tributary Storage Deficiency/Excess	-1.1 MAF	Determine trib deficiency/excess ~ 5.5 MAF
Total Water Supply	86.5 MAF	This is the value that is used on Plate VI-1 - based on this number, adjust rows 11 and 12 (lower and upper limits) Find lower limit for May 1 Find upper limit for May 1
Water Supply from Plate VI-1 -	60	
Water Supply from Plate VI-1 -	70	
	89.9 MAF	
Service Level (from Plate VI-1)	62,000 cfs	
Increase over full service level	27,000 cfs	
Revised Targets		
Sioux City	58,000 cfs	
Omaha	58,000 cfs	
Nebraska City	64,000 cfs	
Kansas City	68,000 cfs	

*Service level revised based on a check of Plate VI-1. The Plate indicated a level near expanded full service. The check indicated the plate did not properly take into account the Jan/Feb runoff of the following year. Winter releases were higher than 20,000 cfs for some evacuation scenarios. The base of the annual flood control zone was now 56.8 MAF instead of 57.1 MAF.

[REDACTED] NWO

From: [REDACTED] NWD02
Sent: Monday, May 02, 2011 2:29 PM
To: Farhat, Jody S NWD02; [REDACTED] NWD02; [REDACTED] IWD02
Cc: [REDACTED] NWD02
Subject: May 2011 Runoff Forecast (UNCLASSIFIED)
Attachments: Runoff_Forecast_May2011.pdf; 2011May Runoff Forecast Executive Summary.docx

Classification: UNCLASSIFIED

Caveats: NONE

Jody,

Attached are the monthly runoff forecast and an executive summary of our forecast and methods. Let us know when you are ready to discuss it.

[REDACTED]
[REDACTED]
USACE, Northwestern Division
Missouri Basin Water Management Division
[REDACTED]

[REDACTED] [usace.army.mil](mailto:[REDACTED]@usace.army.mil)

Classification: UNCLASSIFIED

Caveats: NONE

Missouri River Basin
Calendar Year 2011
Forecasted

1-May-11

Reach Above	Fort Peck	Garrison	Oahe	Fort Randall	Gavins Point	Sioux City	Summation above Gavins Point	Summation above Sioux City	Accumulated Summation above Sioux City
Values in 1000 Acre Feet									
JAN 2011	(History)	299	120	86	67	273	1,003	1,276	1,276
NORMAL	431	261	12	25	100	40	710	750	750
DEPARTURE	312	38	108	61	-33	233	293	526	526
% OF NORM	119	138%	115%	998%	346%	67%	682%	141%	170%
FEB 2011	580	457	318	217	236	524	1,808	2,333	3,609
NORMAL	360	356	90	49	130	92	985	1,077	1,827
DEPARTURE	220	101	228	168	106	432	823	1,256	1,782
% OF NORM	161%	128%	354%	443%	182%	570%	184%	217%	198%
MAR 2011	1,049	1,567	1,806	686	392	1,152	5,501	6,653	10,262
NORMAL	596	1,003	567	209	206	299	2,581	2,880	4,707
DEPARTURE	453	564	1,239	477	186	853	2,920	3,773	5,555
% OF NORM	176%	156%	319%	328%	190%	385%	213%	231%	218%
APR 2011	895	2,748	1,617	238	134	2,081	5,632	7,713	17,975
NORMAL	649	1,080	481	144	180	360	2,534	2,894	7,601
DEPARTURE	246	1,668	1,136	94	-46	1,721	3,098	4,819	10,374
% OF NORM	138%	254%	336%	165%	74%	578%	222%	267%	236%
MAY 2011	(Forecast)	1,859	400	147	186	1,370	4,505	5,875	23,850
NORMAL	1,913	1,245	312	147	186	292	2,971	3,263	10,864
DEPARTURE	1,081	614	88	0	0	1,078	1,534	2,612	12,986
% OF NORM	832	177%	149%	128%	100%	100%	469%	152%	180%
JUN 2011	2,866	3,999	460	152	178	900	7,655	8,555	32,405
NORMAL	1,612	2,667	423	152	178	286	5,032	5,318	16,182
DEPARTURE	1,254	1,332	37	0	0	614	2,623	3,237	16,223
% OF NORM	178%	150%	109%	100%	100%	315%	152%	161%	200%
JUL 2011	1,452	2,669	185	57	137	600	4,500	5,100	37,505
NORMAL	819	1,776	179	57	137	218	2,968	3,186	19,368
DEPARTURE	633	893	6	0	0	382	1,532	1,914	18,137
% OF NORM	177%	150%	103%	100%	100%	275%	152%	160%	194%
AUG 2011	500	900	65	39	115	350	1,619	1,969	39,474
NORMAL	353	604	65	39	115	131	1,176	1,307	20,675
DEPARTURE	147	296	0	0	0	219	443	662	18,799
% OF NORM	142%	149%	100%	100%	100%	267%	138%	151%	191%
SEP 2011	333	452	111	38	111	250	1,045	1,295	40,769
NORMAL	333	452	111	38	111	99	1,045	1,144	21,819
DEPARTURE	0	0	0	0	0	151	0	151	18,950
% OF NORM	100%	100%	100%	100%	100%	253%	100%	113%	187%
OCT 2011	385	523	66	5	120	200	1,099	1,299	42,068
NORMAL	385	523	66	5	120	78	1,099	1,177	22,996
DEPARTURE	0	0	0	0	0	122	0	122	19,072
% OF NORM	100%	100%	100%	100%	100%	256%	100%	110%	183%
NOV 2011	384	398	67	6	118	160	973	1,133	43,201
NORMAL	384	398	67	6	118	76	973	1,049	24,045
DEPARTURE	0	0	0	0	0	84	0	84	19,156
% OF NORM	100%	100%	100%	100%	100%	211%	100%	108%	180%
DEC 2011	329	247	0	12	100	120	688	808	44,009
NORMAL	329	247	0	12	100	52	688	740	24,785
DEPARTURE	0	0	0	0	0	68	0	68	19,224
% OF NORM	100%	100%	100%	100%	100%	231%	100%	109%	178%
Calendar Year Totals									
NORMAL	11,117	16,118	5,216	1,684	1,894	7,980	36,029	44,009	
DEPARTURE	7,213	10,612	2,373	883	1,681	2,023	22,762	24,785	
% OF NORM	3,904	5,506	2,843	801	213	5,957	13,267	19,224	
	154%	152%	220%	191%	113%	394%	158%	178%	

The May 1 forecast for the 2011 runoff above Sioux City, IA is **44.0 MAF** (178% of normal). The May 1 forecast for the 2011 runoff above Gavins Point Dam is **36.0 MAF** (158% of normal).

April 2011 runoff above Sioux City, IA was 7713 kaf, 267% of normal. April 2011 runoff above Gavins Point Dam was 5632 kaf, 222% of normal.

April 2011 runoff:

Fort Peck - 895 kaf (138% of normal),
Garrison - 2748 kaf (254% of normal),
Oahe - 1617 kaf (336% of normal),
Fort Randall - 238 kaf (165% of normal),
Gavins Point - 134 kaf (74% of normal), and
Gavins to Sioux City - 2081 kaf (578% of normal).

While the bulk of the runoff in April occurred from plains snowmelt, precipitation in the basin during April was well-above normal above the upper three projects and slightly above normal between Oahe and Sioux City. As of May 1, 2011 the accumulated runoff above Sioux City, IA was 18.0 maf (236% of normal), while above Gavins Point Dam, the accumulated runoff was 15.9 maf (220% of normal).

The increase from the April 1 forecasts (33.8 maf above Sioux City and 28.8 maf above Gavins Point) is due to greater than expected April runoff and significant increases in mountain snowpack totals during the month of April. During the critical runoff months of May, June and July, forecasted runoff into the mainstem reservoir system above Gavins Point are forecasted to total 4505 kaf (the equivalent of 73 kcfs/day) in May, 7655 kaf (124 kcfs/day) in June, and 4500 kaf (73 kcfs/day) in July.

The May-July runoff forecast is based on regression equations that relate the peak mountain snow

accumulations to May-July runoff volumes. As of May 1, 2011 the Fort Peck basin contained 140% of the normal April 15 peak mountain snowpack, while the Fort Peck to Garrison basin contained 136% of the normal April 15 peak mountain snowpack. Total forecasted runoff from May-July above Fort Peck is 6230 kaf (177% of normal). This forecast would rank the May-July runoff period above Fort Peck as the 5th highest of record since 1898. Likewise, total runoff forecast to occur during May-July in the Fort Peck to Garrison reach is 8527 kaf (150% of normal). This forecast would rank the May-July runoff period from Garrison to Fort Peck as the 10th highest of record since 1898.

Above Fort Peck, the distribution of the May-July forecasted runoff is 31% (May), 46% (June) and 23% (July). In the Fort Peck to Garrison reach, the distribution of the May-July forecasted runoff is 22% (May), 47% (June), and 31% (July). These distributions are based on historic runoff patterns. Runoff into both of these projects are forecasted to be above normal in August as the high streamflows recede from the snowmelt runoff, and subsequent months' runoff returns to more normal conditions.

Since Oahe received much greater than normal runoff in March and April as a result of plains snowmelt followed by several rainstorms, we expect runoff volumes in May to be greater than normal, but slowly recede to normal by August. Runoff volumes into Fort Randall and Gavins Point are expected to be normal.

In the Gavins Point to Sioux City reach, we expect May runoff from the James, Vermillion and Big Sioux Rivers to contribute 1,370 kaf (20,600 cfs/day). This forecast was determined by receding the May 1, 2011 discharge in each river at their historic recession rates. We expect subsequent runoff volumes in this reach to be above normal through the remainder of the calendar year due to elevated contributions from the

James and Big Sioux River basins from persistent wet soil conditions. The forecasted calendar year runoff in the Gavins to Sioux City reach is expected to be 7980 kaf, almost 400% of normal, but less than the 520% of normal received in 2010.

[REDACTED] NWO

From: [REDACTED] NWD02
Sent: Monday, May 02, 2011 10:30 AM
To: [REDACTED] NWO
Cc: Farhat, Jody S NWD02; [REDACTED] NWD02
Subject: RE: Release Capacities at Mainstems (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

[REDACTED]
A little clarification and some additional information:

Fort Peck: Powerplant flow capacity is actually 15,000 to 16,000 cfs. Use of the flood tunnels is limited to low flows (less than 4,000 cfs) and short durations. For reference, in 1997 total releases were as high as 22,000 cfs. At that time powerplant releases were approximately 14,500 cfs and spillway releases were 7,500 cfs. Other than bank erosion I don't recall there being any impacts at the higher releases. Flows below the project this year have been nearly 30,000 cfs (a combination of Fort Peck flows and downstream runoff - mainly the Milk River).

Garrison: For reference, in 1997 total releases were as high as 59,000 cfs. At that time powerplant releases were approximately 41,000 cfs and outlet tunnel releases were 18,000 cfs. At the time of the 59,000 cfs release, the stage at Bismarck was near 14 feet, which did put water around some homes in subdivisions near Bismarck. We generally try to keep the Bismarck stage below 13 feet.

[REDACTED]
Missouri River Basin
Water Management Division

-----Original Message-----

From: [REDACTED] NWD02
Sent: Thursday, April 28, 2011 1:26 PM
To: [REDACTED] NWO
Cc: Farhat, Jody S NWD02; [REDACTED] NWD02
Subject: Release Capacities at Mainstems (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

[REDACTED]
Got your voice mail. I assume you're speaking about Fort Peck, Garrison, and Oahe? We're already using the spillways at Fort Randall and Gavins.

Oahe: Rather than using the spillway, we use the outlet tunnels #1-#6. Tunnel capacity at max pool (1620') is 111,000 cfs. The spillway has never been used and provision for a conventional spillway chute and stilling basin has been deferred.

Garrison: Like Oahe, we use the outlet tunnels #6-#8. Capacity of these tunnels is about 100,000 cfs at max pool, which exceeds downstream channel capacity. Spillway discharge capacity at max pool (1854') is 660,000 cfs. An unlined pilot channel will erode and guide flows to the Missouri River in the event that spillway releases are required. To my knowledge that spillway has never been used.

Fort Peck: Unlike Oahe and Garrison, we cannot use the flood tunnels at Fort Peck and must use the spillway for total flows > power flows (max power flows are about 11,000 cfs). Discharge capacity at max pool (2250') is 230,000 cfs.

- [REDACTED]
[REDACTED]
[REDACTED]
Missouri River Basin Water Management,
Northwestern Division, USACE
402 [REDACTED]
402 [REDACTED] (fax)

Classification: UNCLASSIFIED
Caveats: NONE

Classification: UNCLASSIFIED
Caveats: NONE

[REDACTED] NWO

From: [REDACTED] NWD02
Sent: Monday, May 02, 2011 8:41 AM
To: Farhat, Jody S NWD02
Subject: RE: Release Capacities at Mainstems (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Jody,
Do you recall what they consider to be high discharges for the outlet tunnels at Fort Peck?

I propose something like this to add to [REDACTED] original:

Fort Peck: Powerplant flow capacity is 15,000 to 16,000 cfs. Use of the flood tunnels is limited to low flows (approximately ??). For reference, in 1997 total releases were as high as 22,000 cfs. At that time powerplant releases were approximately 14,500 cfs and spillway releases were 7,500 cfs. Other than bank erosion I don't recall there being any impacts at the higher releases. Flows below the project this year have been nearly 30,000 cfs (a combination of Fort Peck flows and downstream runoff - mainly the Milk River).

Garrison: For reference, in 1997 total releases were as high as 59,000 cfs. At that time powerplant releases were approximately 41,000 cfs and outlet tunnel releases were 18,000 cfs. At the time of the 59,000 cfs release, the stage at Bismarck was near 14 feet, which did put water around some homes in subdivisions near Bismarck. We generally try to keep the Bismarck stage below 13 feet.

[REDACTED]
-----Original Message-----

From: Farhat, Jody S NWD02
Sent: Friday, April 29, 2011 3:41 PM
To: [REDACTED] NWD02
Cc: [REDACTED] NWD02
Subject: RE: Release Capacities at Mainstems (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

The answer provided for Fort Peck is not correct. We can use the outlet tunnels at Fort Peck, but not for very high flows or very high discharges. Also peak powerplant flows at Ftpk are not correct.

[REDACTED] - please confirm/correct these figures and send [REDACTED] a clarifying response.

In the future, I would recommend that Power section answer questions regarding plant capacity, etc since they are more aware of operational issues, outages, and other limitations.

Jody

-----Original Message-----

From: [REDACTED] NWD02
Sent: Thursday, April 28, 2011 1:26 PM
To: [REDACTED] NWO

Cc: Farhat, Jody S NWD02; [REDACTED] NWD02
Subject: Release Capacities at Mainstems (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

[REDACTED]

Got your voice mail. I assume you're speaking about Fort Peck, Garrison, and Oahe? We're already using the spillways at Fort Randall and Gavins.

Oahe: Rather than using the spillway, we use the outlet tunnels #1-#6. Tunnel capacity at max pool (1620') is 111,000 cfs. The spillway has never been used and provision for a conventional spillway chute and stilling basin has been deferred.

Garrison: Like Oahe, we use the outlet tunnels #6-#8. Capacity of these tunnels is about 100,000 cfs at max pool, which exceeds downstream channel capacity. Spillway discharge capacity at max pool (1854') is 660,000 cfs. An unlined pilot channel will erode and guide flows to the Missouri River in the event that spillway releases are required. To my knowledge that spillway has never been used.

Fort Peck: Unlike Oahe and Garrison, we cannot use the flood tunnels at Fort Peck and must use the spillway for total flows > power flows (max power flows are about 11,000 cfs). Discharge capacity at max pool (2250') is 230,000 cfs.

[REDACTED]
[REDACTED]
[REDACTED]
Missouri River Basin Water Management,
Northwestern Division, USACE
402 [REDACTED]
402 [REDACTED] (fax)

Classification: UNCLASSIFIED
Caveats: NONE

Classification: UNCLASSIFIED
Caveats: NONE

Classification: UNCLASSIFIED
Caveats: NONE

[REDACTED] NWO

From: [REDACTED] NWD02
Sent: Tuesday, May 03, 2011 1:09 PM
To: Farhat, Jody S NWD02; [REDACTED] NWD02; 'kinney@wapa.gov'; 'bcallies@wapa.gov'; [REDACTED] NWD02; [REDACTED] NWD02; 'shimek@wapa.gov'
Subject: May 2011 Reservoir Regulation Studies Graphics and Statistics (UNCLASSIFIED)
Attachments: resfcasmay.pdf; WAPAMNTH-11-MAY.xlsx; WAPA.MonthlyStudies.Graphic.MAY.2011.pptx

Classification: UNCLASSIFIED
Caveats: NONE

Everyone,

Here are the May 2011 study graphics and statistics.

If you have any questions please contact me.

Thanks,

[REDACTED]
Hydrology Branch
Missouri River Basin Water Management Division
[REDACTED]

Classification: UNCLASSIFIED
Caveats: NONE

MAY 1, 2011 / BASIC CONDITION / 44.0 MAF / BALANCED
 FULL SERV / NAV SEAS +10 DAYS / NO MAY PULSE
 Elevations & Storages are for Date Shown
 Avg Discharge & Energy are Monthly Values
 Date of Study: May 1, 2011

	30-Apr-11	31-May	2011 30-Jun	31-Jul	31-Aug	30-Sep	31-Oct	30-Nov	31-Dec	2012 31-Jan	29-Feb
FORT PECK -----											
ELEV FTMSL	2240.9	2243.1	2247.9	2247.7	2245.3	2242.7	2240.4	2238.3	2236.8	2235.2	2234.0
DISCH KCFS	7.1	18.0	20.0	20.0	16.0	15.0	14.0	14.0	12.0	13.0	13.0
GARRISON -----											
ELEV FTMSL	1847.3	1847.4	1851.5	1852.2	1849.1	1845.7	1842.6	1840.0	1839.7	1838.4	1837.5
DISCH KCFS	14.9	43.0	49.0	49.0	46.0	43.0	38.0	37.7	19.0	25.0	25.0
OAHE -----											
ELEV FTMSL	1616.9	1616.3	1616.5	1615.6	1614.0	1612.0	1610.5	1608.4	1606.7	1606.9	1607.5
DISCH KCFS	26.0	50.0	52.6	54.1	52.5	54.1	45.9	48.6	27.6	23.5	22.7
BIG BEND -----											
ELEV FTMSL	1420.6	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0
DISCH KCFS	24.9	50.6	52.6	54.0	52.2	53.7	45.6	48.3	27.4	23.5	22.7
FORT RANDALL ----											
ELEV FTMSL	1359.0	1359.0	1359.0	1358.0	1355.2	1353.5	1345.0	1337.5	1339.3	1344.8	1350.0
DISCH KCFS	27.7	52.8	55.0	56.0	56.1	56.1	55.7	55.8	25.7	18.2	17.0
GAVINS POINT ----											
ELEV FTMSL	1205.3	1206.0	1206.0	1206.0	1206.5	1207.5	1207.5	1207.5	1207.5	1207.5	1206.0
DISCH KCFS	30.3	54.5	57.5	57.5	57.5	57.5	57.5	57.5	28.0	20.0	20.0
SYSTEM -----											
STORAGE 1000 AF	65497	65825	68542	68321	65822	63197	60477	58005	57153	56832	56812
ENERGY GWh	12861	1517	1497	1567	1543	1501	1422	1367	877	820	752
PEAK POWER MW		2377	2383	2386	2390	2381	2355	2290	2292	2313	2320

MAY 1, 2011 / LOWER BASIC / 38.8 MAF / BALANCED
 FULL SERV / NAV SEAS +10 DAYS / NO MAY PULSE

	30-Apr-11	31-May	2011 30-Jun	31-Jul	31-Aug	30-Sep	31-Oct	30-Nov	31-Dec	2012 31-Jan	29-Feb
FORT PECK -----											
ELEV FTMSL	2240.9	2241.9	2245.6	2245.3	2242.8	2240.9	2239.6	2238.3	2237.0	2235.4	2234.0
DISCH KCFS	7.1	18.0	17.0	16.0	14.0	11.3	9.0	9.0	9.0	11.0	11.0
GARRISON -----											
ELEV FTMSL	1847.3	1846.5	1849.9	1849.9	1846.8	1844.5	1843.2	1842.1	1840.8	1839.0	1837.5
DISCH KCFS	14.9	43.0	42.0	42.0	40.0	29.9	21.0	21.0	19.0	24.0	24.0
OAHE -----											
ELEV FTMSL	1616.9	1615.9	1616.0	1616.0	1615.7	1613.6	1611.4	1608.5	1607.4	1607.3	1607.5
DISCH KCFS	26.0	51.1	45.0	41.4	38.5	40.9	32.5	35.2	23.7	24.0	23.4
BIG BEND -----											
ELEV FTMSL	1420.6	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0
DISCH KCFS	24.9	51.7	45.0	41.2	38.1	40.3	32.1	34.8	23.5	24.0	23.4
FORT RANDALL ----											
ELEV FTMSL	1359.0	1359.0	1359.0	1358.5	1355.2	1353.5	1345.0	1337.5	1339.2	1344.8	1349.9
DISCH KCFS	27.7	53.5	46.8	42.2	42.5	42.5	42.1	42.2	21.8	18.6	17.5
GAVINS POINT ----											
ELEV FTMSL	1205.3	1206.0	1206.0	1206.0	1206.5	1207.5	1207.5	1207.5	1207.5	1207.5	1206.0
DISCH KCFS	30.3	54.5	49.0	43.5	43.5	43.5	43.5	43.5	23.5	20.0	20.0
SYSTEM -----											
STORAGE 1000 AF	65497	65091	67216	67071	65003	62927	60780	58764	57785	57160	56835
ENERGY GWh	11332	1528	1405	1395	1356	1244	1053	1029	768	811	744
PEAK POWER MW		2373	2381	2386	2400	2390	2366	2305	2299	2317	2320

MAY 1, 2011 / UPPER BASIC / 49.2 MAF / BALANCED
 FULL SERV / NAV SEAS +10 DAYS / NO MAY PULSE

	30-Apr-11	31-May	2011 30-Jun	31-Jul	31-Aug	30-Sep	31-Oct	30-Nov	31-Dec	2012 31-Jan	29-Feb
FORT PECK -----											
ELEV FTMSL	2240.9	2244.3	2250.0	2249.7	2246.1	2242.9	2240.1	2237.5	2236.3	2235.0	2234.0
DISCH KCFS	7.1	20.0	26.0	26.0	24.0	20.0	18.0	18.0	12.0	13.0	13.0
GARRISON -----											
ELEV FTMSL	1847.3	1848.0	1853.0	1854.0	1850.3	1846.2	1843.2	1840.9	1840.3	1838.7	1837.5
DISCH KCFS	14.9	48.5	61.5	61.5	61.5	54.2	44.0	42.1	22.0	28.0	28.0
OAHE -----											
ELEV FTMSL	1616.9	1616.1	1617.0	1616.9	1617.0	1615.4	1613.5	1610.8	1607.1	1607.1	1607.5
DISCH KCFS	26.0	57.4	62.2	62.4	59.4	63.8	55.7	58.2	41.2	27.8	27.1
BIG BEND -----											
ELEV FTMSL	1420.6	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0
DISCH KCFS	24.9	58.0	62.2	62.3	59.1	63.5	55.5	58.1	41.0	27.8	27.1
FORT RANDALL ----											
ELEV FTMSL	1359.0	1362.0	1362.0	1360.0	1355.2	1353.4	1344.9	1337.4	1339.2	1344.7	1349.9
DISCH KCFS	27.7	56.4	65.1	66.0	66.2	66.2	65.8	65.8	39.5	22.6	21.6
GAVINS POINT ----											
ELEV FTMSL	1205.3	1206.0	1206.0	1206.0	1206.5	1207.5	1207.5	1207.5	1207.5	1207.5	1206.0
DISCH KCFS	30.3	58.5	68.0	68.0	68.0	68.0	68.0	68.0	42.0	25.0	25.0
SYSTEM -----											
STORAGE 1000 AF	65497	66549	70073	70143	67468	64622	61617	58911	57392	56924	56807
ENERGY GWh	13996	1597	1566	1629	1620	1572	1562	1478	1164	942	868
PEAK POWER MW		2348	2356	2374	2401	2394	2369	2300	2296	2314	2320

DATE OF STUDY 05/03/11

MAY 1, 2011 / BASIC CONDITION / 44.0 MAF / BALANCED

99001 9901 4 PAGE

1

TIME OF STUDY 07:42:40

FULL SERV / NAV SEAS +10 DAYS / NO MAY PULSE
VALUES IN 1000 AF EXCEPT AS INDICATED

STUDY NO

6

	30APR11		2011				VALUES IN 1000 AF EXCEPT AS INDICATED						
	INI-SUM	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	31JAN	29FEB
--FORT PECK--													
NAT INFLOW	8834	1913	2866	1452	500	333	385	192	90	102	329	312	360
DEPLETION	467	298	525	234	11	-75	-42	-41	-19	-22	-132	-153	-118
EVAPORATION	493			31	97	120	103	45	21	24	51		
MOD INFLOW	7874	1615	2341	1187	392	288	324	187	87	100	410	465	478
RELEASE	9382	1107	1190	1230	984	893	861	417	194	222	738	799	748
STOR CHANGE	-1508	508	1151	-43	-592	-605	-536	-230	-107	-122	-328	-334	-270
STORAGE	16292	16800	17951	17908	17316	16711	16175	15945	15839	15717	15388	15054	14784
ELEV FTMSL	2240.9	2243.1	2247.9	2247.7	2245.3	2242.7	2240.4	2239.3	2238.8	2238.3	2236.8	2235.2	2234.0
DISCH KCFS	7.1	18.0	20.0	20.0	16.0	15.0	14.0	14.0	14.0	14.0	12.0	13.0	13.0
POWER													
AVE POWER MW		167	170	172	171	169	168	166	166	165	161	164	163
PEAK POW MW		168	172	172	170	168	167	166	166	165	164	163	162
ENERGY GWH	1222.8	124.6	122.3	127.7	127.2	121.9	124.7	59.9	27.9	31.8	120.1	121.7	113.2
--GARRISON--													
NAT INFLOW	11664	1859	3999	2669	900	452	523	199	93	106	247	261	356
DEPLETION	983	177	765	602	107	-142	-25	-121	-56	-65	-115	-87	-57
CHAN STOR	-57	-103	-19		37	9	10			0	20	-10	
EVAPORATION	560			36	113	138	116	51	23	26	57		
REG INFLOW	19446	2685	4405	3261	1701	1358	1302	686	320	366	1062	1138	1161
RELEASE	22688	2644	2916	3013	2828	2561	2337	1131	528	587	1168	1537	1438
STOR CHANGE	-3242	41	1489	248	-1127	-1203	-1034	-445	-207	-221	-106	-400	-277
STORAGE	21349	21390	22880	23128	22000	20797	19763	19318	19111	18890	18784	18384	18107
ELEV FTMSL	1847.3	1847.4	1851.5	1852.2	1849.1	1845.7	1842.6	1841.3	1840.7	1840.0	1839.7	1838.4	1837.5
DISCH KCFS	14.9	43.0	49.0	49.0	46.0	43.0	38.0	38.0	38.0	37.0	19.0	25.0	25.0
POWER													
AVE POWER MW		501	503	504	504	501	473	466	463	451	239	313	311
PEAK POW MW		501	504	505	502	500	495	482	480	477	476	471	468
ENERGY GWH	3156.9	372.9	361.8	375.3	374.7	360.9	352.2	167.7	77.8	86.7	178.1	232.6	216.1
--OAHE--													
NAT INFLOW	1456	400	460	185	65	111	66	34	16	18		12	90
DEPLETION	583	71	145	173	116	28	-10	1	0	1	12	18	28
CHAN STOR	-30	-100	-21		11	11	19			4	71	-24	
EVAPORATION	547			35	108	133	114	51	23	26	56		
REG INFLOW	22984	2873	3209	2990	2680	2522	2318	1113	519	582	1171	1507	1500
RELEASE	26142	3074	3132	3328	3228	3218	2824	1356	666	869	1695	1445	1308
STOR CHANGE	-3158	-201	77	-338	-548	-696	-506	-244	-147	-287	-524	62	192
STORAGE	21990	21789	21866	21529	20981	20285	19779	19536	19389	19102	18578	18640	18832
ELEV FTMSL	1616.9	1616.3	1616.5	1615.6	1614.0	1612.0	1610.5	1609.7	1609.3	1608.4	1606.7	1606.9	1607.5
DISCH KCFS	26.0	50.0	52.6	54.1	52.5	54.1	45.9	45.6	48.0	54.7	27.6	23.5	22.7
POWER													
AVE POWER MW		664	693	708	685	695	600	592	617	683	355	302	293
PEAK POW MW		754	755	750	742	731	723	720	717	712	703	705	708
ENERGY GWH	4117.2	494.0	499.2	527.0	509.7	500.0	446.1	213.1	103.7	131.2	264.3	224.7	204.0
--BIG BEND--													
EVAPORATION	103			6	20	25	22	10	5	5	11		
REG INFLOW	26039	3074	3132	3322	3208	3193	2802	1347	662	863	1683	1445	1308
RELEASE	26076	3111	3132	3322	3208	3193	2802	1347	662	863	1683	1445	1308
STORAGE	1658	1621	1621	1621	1621	1621	1621	1621	1621	1621	1621	1621	1621
ELEV FTMSL	1420.6	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0
DISCH KCFS	24.9	50.6	52.6	54.0	52.2	53.7	45.6	45.3	47.7	54.4	27.4	23.5	22.7
POWER													
AVE POWER MW		228	236	245	244	254	221	223	235	267	137	115	109
PEAK POW MW		475	475	486	509	517	538	538	538	538	538	538	529
ENERGY GWH	1484.8	169.6	169.9	182.6	181.4	182.5	164.2	80.4	39.5	51.3	101.8	85.7	75.8
--FORT RANDALL--													
NAT INFLOW	530	147	152	57	39	38	5	3	1	2	12	25	49
DEPLETION	73	9	12	18	15	7	1	1	0	1	3	3	3
EVAPORATION	118			8	26	31	25	9	4	4	10		
REG INFLOW	26418	3249	3272	3352	3206	3193	2781	1339	659	860	1686	1467	1354
RELEASE	27174	3249	3272	3441	3450	3339	3425	1660	775	885	1580	1117	980
STOR CHANGE	-756			-89	-244	-146	-643	-321	-116	-26	106	350	374
STORAGE	3882	3882	3882	3793	3549	3402	2759	2438	2322	2296	2402	2752	3126
ELEV FTMSL	1359.0	1359.0	1359.0	1358.0	1355.2	1353.5	1345.0	1340.0	1338.0	1337.5	1339.3	1344.8	1350.0
DISCH KCFS	27.7	52.8	55.0	56.0	56.1	56.1	55.7	55.8	55.8	55.8	25.7	18.2	17.0
POWER													
AVE POWER MW		368	368	366	359	352	335	306	290	284	187	138	136
PEAK POW MW		368	368	364	355	349	317	294	285	283	294	319	339
ENERGY GWH	2129.8	273.7	264.6	272.1	267.4	253.3	249.2	110.1	48.7	54.5	139.4	102.4	94.3
--GAVINS POINT--													
NAT INFLOW	1295	186	178	137	115	111	120	59	28	31	100	100	130
DEPLETION	110	19	24	39	10	-5	2	5	2	3	10	1	
CHAN STOR	17	-49	-4	-2	0	0	1	0	0	0	56	14	2
EVAPORATION	36			2	6	9	8	3	2	2	4		
REG INFLOW	28340	3367	3422	3535	3549	3447	3536	1711	798	912	1722	1230	1112
RELEASE	28324	3351	3422	3535	3536	3422	3536	1711	798	912	1722	1230	1150
STOR CHANGE	16	16		13	25	25	25						-38
STORAGE	326	342	342	342	355	380	380	380	380	380	380	380	342
ELEV FTMSL	1205.3	1206.0	1206.0	1206.0	1206.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1206.0
DISCH KCFS	30.3	54.5	57.5	57.5	57.5	57.5	57.5	57.5	57.5	57.5	28.0	20.0	20.0
POWER													
AVE POWER MW		110	110	110	111	114	115	115	115	115	98	71	70
PEAK POW MW		111	110	110	112	115	115	115	115	115	117	117	114
ENERGY GWH	749.8	81.6	79.4	82.1	82.7	81.9	85.4	41.3	19.3	22.0	72.9	52.5	48.7
--GAVINS POINT - SIOUX CITY--													
NAT INFLOW	4082	1370	900	600	350	250	200	80	37	43	120	40	92
DEPLETION	230	36	31	39	36	24	11	6	3	3	13	14	14
REGULATED FLOW AT SIOUX CITY													
KAF	32176	4685	4291	4096	3850	3648	3725	1785	833	952	1829	1256	1228
KCFS	76.2	72.1	66.6	62.6	61.3	60.6	60.6	60.0	60.0	60.0	29.7	20.4	21.4
--TOTAL--													
NAT INFLOW	27861	5875	8555	5100	1969	1295	1299	567	264	302	808	750	1077
DEPLETION	2446	610	1502	1105	295	-163	-63	-149	-69	-79	-209	-204	-130
CHAN STOR	-67	-252	-45	-2	48	20	29	0	0	3	149	-20	2
EVAPORATION	1856			118	370	456	386	170	78	88	189		
STORAGE	65497	65825	68542	68321	65822	63197	60477	59238	58661	58005	57153	56832	56812
SYSTEM POWER													
AVE POWER MW		2038	2080	2106	2074	2084	1911	1868	1886	1966	1178	1102	1081
PEAK POW MW		2377	2383	2386	2390	2381	2355	2314	2300	2290	2292	2313	2320
ENERGY GWH	12861.2	1516.5	1497.3	1566.7	1543.1	1500.6	1421.8	672.5	316.8	377.5	876.6	819.6	752.2
DAILY GWH		48.9	49.9	50.5	49.8	50.0	45.9	44.8	45.3	47.2	28.3	26.4	25.9
	INI-SUM	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	31JAN	29FEB

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--FORT PECK--																		
NAT INFLOW	10601	2296	3439	1742	600	400	462	231	108	123	395	374	432					
DEPLETION	263	260	513	204	-62	-129	-89	-30	-14	-16	-123	-146	-105					
EVAPORATION	339			24	74	91	77	18	8	9	38							
MOD INFLOW	9999	2036	2926	1514	588	438	474	243	113	130	480	520	537					
RELEASE	11505	1230	1547	1599	1476	1191	1107	536	250	286	738	799	748					
STOR CHANGE	-1506	806	1379	-84	-888	-752	-633	-293	-137	-156	-258	-279	-211					
STORAGE	16292	17098	18477	18393	17505	16753	16120	15827	15690	15534	15276	14997	14786					
ELEV FTMSL	2240.9	2244.3	2250.0	2249.7	2246.1	2242.9	2240.1	2238.8	2238.2	2237.5	2236.3	2235.0	2234.0					
DISCH KCFS	7.1	20.0	26.0	26.0	24.0	20.0	18.0	18.0	18.0	18.0	12.0	13.0	13.0					
POWER																		
AVE POWER MW		168	171	173	171	169	167	166	165	164	161	163	163					
PEAK POW MW		169	173	172	170	168	166	165	165	164	164	163	162					
ENERGY GWH	1222.8	124.8	122.8	128.4	127.4	121.8	124.4	59.6	27.7	31.6	119.7	121.5	113.1					
--GARRISON--																		
NAT INFLOW	13997	2231	4799	3203	1080	542	628	239	112	127	296	313	427					
DEPLETION	970	100	802	621	93	-133		-118	-55	-63	-117	-96	-64					
CHAN STOR	-55	-122	-57		18	37	19				59	-10						
EVAPORATION	390			28	86	105	88	20	9	11	43							
REG INFLOW	24086	3238	5487	4153	2395	1798	1666	872	407	465	1166	1199	1239					
RELEASE	27327	2982	3660	3782	3782	3224	2705	1309	611	587	1353	1722	1611					
STOR CHANGE	-3241	256	1828	372	-1387	-1426	-1039	-437	-204	-122	-187	-523	-372					
STORAGE	21349	21605	23433	23805	22418	20992	19952	19515	19312	19190	19003	18480	18108					
ELEV FTMSL	1847.3	1848.0	1853.0	1854.0	1850.3	1846.2	1843.2	1841.9	1841.3	1840.9	1840.3	1838.7	1837.5					
DISCH KCFS	14.9	48.5	61.5	61.5	61.5	54.2	44.0	44.0	44.0	37.0	22.0	28.0	28.0					
POWER																		
AVE POWER MW		501	503	505	504	501	499	491	482	454	278	351	348					
PEAK POW MW		501	504	505	502	500	498	483	481	481	478	473	468					
ENERGY GWH	3272.1	372.9	361.9	375.7	374.9	360.9	371.4	176.6	81.0	87.1	206.9	260.9	241.9					
--OAHE--																		
NAT INFLOW	1746	480	552	222	78	133	79	40	19	21		14	108					
DEPLETION	583	71	145	173	116	28	-10	1	0	1	12	18	28					
CHAN STOR	-43	-119	-47		26	37			0	26	57	-24						
EVAPORATION	391			27	84	105	90	21	10	11	43							
REG INFLOW	28055	3272	4020	3804	3659	3250	2741	1327	619	623	1355	1694	1691					
RELEASE	31213	3532	3703	3838	3651	3794	3427	1642	801	1022	2533	1710	1560					
STOR CHANGE	-3158	-260	317	-34	9	-544	-686	-315	-181	-399	-1178	-16	130					
STORAGE	21990	21730	22047	22012	22021	21477	20791	20476	20294	19896	18718	18702	18832					
ELEV FTMSL	1616.9	1616.1	1617.0	1616.9	1617.0	1615.4	1613.5	1612.5	1612.0	1610.8	1607.1	1607.1	1607.5					
DISCH KCFS	26.0	57.4	62.2	62.4	59.4	63.8	55.7	55.2	57.7	64.4	41.2	27.8	27.1					
POWER																		
AVE POWER MW		747	754	756	757	752	719	706	728	727	532	358	349					
PEAK POW MW		753	756	756	757	748	739	734	731	724	706	706	708					
ENERGY GWH	4721.2	555.7	542.9	562.5	562.9	541.2	534.6	254.2	122.3	139.6	396.2	266.0	243.0					
--BIG BEND--																		
EVAPORATION	71			5	15	19	16	4	2	2	9							
REG INFLOW	31143	3532	3703	3834	3636	3776	3411	1638	799	1020	2524	1710	1560					
RELEASE	31180	3569	3703	3834	3636	3776	3411	1638	799	1020	2524	1710	1560					
STORAGE	1658	1621	1621	1621	1621	1621	1621	1621	1621	1621	1621	1621	1621					
ELEV FTMSL	1420.6	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0					
DISCH KCFS	24.9	58.0	62.2	62.3	59.1	63.5	55.5	55.1	57.6	64.3	41.0	27.8	27.1					
POWER																		
AVE POWER MW		249	266	275	276	299	268	270	282	314	203	136	130					
PEAK POW MW		440	440	464	509	518	538	538	538	538	538	538	529					
ENERGY GWH	1749.3	185.4	191.2	204.9	205.5	215.6	199.1	97.3	47.4	60.3	151.1	101.2	90.4					
--FORT RANDALL--																		
NAT INFLOW	635	176	182	68	47	46	6	4	2	2	14	30	59					
DEPLETION	73	9	12	18	15	7	1	1	0	1	3	3	3					
EVAPORATION	82			6	19	24	18	4	2	2	7							
REG INFLOW	31662	3736	3873	3877	3649	3791	3398	1637	799	1019	2530	1737	1616					
RELEASE	32426	3465	3873	4060	4071	3940	4044	1959	914	1045	2427	1387	1242					
STOR CHANGE	-764	271		-182	-423	-149	-646	-322	-115	-26	104	350	374					
STORAGE	3882	4153	4153	3971	3548	3399	2753	2431	2316	2290	2394	2744	3118					
ELEV FTMSL	1359.0	1362.0	1362.0	1360.0	1355.2	1353.4	1344.9	1339.8	1337.8	1337.4	1339.2	1344.7	1349.9					
DISCH KCFS	27.7	56.4	65.1	66.0	66.2	66.2	65.8	65.8	65.8	65.8	39.5	22.6	21.6					
POWER																		
AVE POWER MW		372	375	372	361	350	333	303	287	281	273	170	171					
PEAK POW MW		375	375	369	353	347	314	291	282	280	293	319	339					
ENERGY GWH	2252.7	277.0	270.0	277.1	268.6	252.1	247.8	109.1	48.2	54.0	203.2	126.7	119.0					
--GAVINS POINT--																		
NAT INFLOW	1554	223	214	164	138	133	144	71	33	38	120	120	156					
DEPLETION	110	19	24	39	10	-5	2	5	2	3	10	1						
CHAN STOR	8	-56	-17	-2	0	0	1	0	0	0	49	31	2					
EVAPORATION	24			2	5	6	6	1	1	1	3							
REG INFLOW	33854	3613	4046	4181	4194	4071	4181	2023	944	1079	2583	1537	1400					
RELEASE	33838	3597	4046	4181	4181	4046	4181	2023	944	1079	2583	1537	1438					
STOR CHANGE	16	16		13	25								-38					
STORAGE	326	342	342	342	355	380	380	380	380	380	380	380	342					
ELEV FTMSL	1205.3	1206.0	1206.0	1206.0	1206.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1206.0					
DISCH KCFS	30.3	58.5	68.0	68.0	68.0	68.0	68.0	68.0	68.0	68.0	42.0	25.0	25.0					
POWER																		
AVE POWER MW		109	108	108	109	112	113	113	113	113	116	88	87					
PEAK POW MW		110	108	108	110	113	113	113	113	113	116	117	114					
ENERGY GWH	778.1	80.9	77.6	80.2	80.9	80.4	84.3	40.8	19.0	21.8	86.5	65.3	60.4					
--GAVINS POINT - SIOUX CITY--																		
NAT INFLOW	4898	1644	1080	720	420	300	240	96	45	51	144	48	110					
DEPLETION	230	36	31	39	36	24	11	6	3	3	13	14	14					
REGULATED FLOW AT SIOUX CITY																		
KAF	38506	5205	5095	4862	4565	4322	4410	2113	986	1127	2714	1571	1534					
KCFS		84.7	85.6	79.1	74.2	72.6	71.7	71.0	71.0	71.0	44.1	25.6	26.7					
--TOTAL--																		
NAT INFLOW	33431	7050	10266	6119	2363	1554	1559	680	317	363	969	899	1292					
DEPLETION	2229	495	1527	1094	208	-208	-85	-135	-63	-72	-202	-206	-124					
CHAN STOR	-89	-298	-120	-2	18	63	57	0	0	26	167	-2	2					
EVAPORATION	1297			90	283	349	295	68	31	35	144							
STORAGE	65497	66549	70073	70143	67468	64622	61617	60250	59613	58911	57392	56924	56807					
SYSTEM POWER																		
AVE POWER MW		2146	2176	2189	2178	2183	2099	2049	2058	2053	1564	1266	1247					
PEAK POW MW		2348	2356	2374	2401	2394	2369	2325	2311	2300	2296	2314	2320					
ENERGY GWH	13996.1	1596.7	1566.4	1628.7	1620.2	1571.9	1561.6	737.6	345.7	394.2	1163.5	941.6	867.9					
DAILY GWH		51.5	52.2	52.5	52.3	52.4	50.4	49.2	49.4	49.3	37.5	30.4	29.9					
INI-SUM		31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	31JAN	29FEB					

Gavins Point Dam Release

(million acre-feet)

	MAX 67-10	MIN 67-10	MEAN 67-10	LAST YEAR	Jan-11 FCST	Jan-11 LD fest	Jan-11 UD fest	Feb-11 FCST	Feb-11 LD fest	Feb-11 UD fest	Mar-11 FCST	Mar-11 LD fest	Mar-11 UD fest	Apr-11 FCST	Apr-11 LD fest	Apr-11 UD fest	May-11 FCST	May-11 LD fest	May-11 UD fest	
JAN	1.553	0.702	1.051	0.978	1.138	1.045	1.291	1.139	1.139	1.139	1.139	1.139	1.139	1.139	1.139	1.139	1.139	1.139	1.139	* JAN
FEB	1.685	0.549	0.966	0.834	1.111	0.994	1.277	1.166	0.944	1.333	1.147	1.147	1.147	1.147	1.147	1.147	1.147	1.147	1.147	* FEB
MAR	2.191	0.623	1.206	0.922	1.389	1.313	1.389	1.389	1.313	1.389	1.433	1.488	1.433	1.291	1.291	1.291	1.291	1.291	1.291	* MAR
APR	2.993	0.605	1.477	0.912	1.598	1.773	1.904	1.589	1.773	1.904	1.589	1.773	1.904	1.488	1.488	1.904	1.805	1.805	1.805	* APR
MAY	3.664	0.651	1.730	1.550	1.888	2.084	2.890	1.888	2.084	2.890	1.888	2.085	2.829	2.183	2.084	2.951	3.351	3.351	3.597	MAY
JUN	3.569	0.715	1.771	1.649	1.880	2.041	3.094	1.880	2.041	3.094	1.880	2.041	3.094	2.321	2.041	3.213	3.422	2.916	4.046	JUN
JUL	3.782	0.495	1.983	2.152	1.943	2.109	3.443	1.943	2.109	3.474	1.943	2.109	3.443	2.398	2.109	3.659	3.535	2.675	4.181	JUL
AUG	3.959	0.661	2.129	2.581	2.041	2.091	3.443	2.041	2.091	3.474	2.041	2.091	3.443	2.398	2.091	3.659	3.536	2.675	4.181	AUG
SEP	3.894	1.102	2.112	2.805	2.083	1.993	3.332	2.112	1.993	3.362	2.142	1.993	3.332	2.678	1.993	3.541	3.422	2.588	4.046	SEP
OCT	4.197	0.760	2.106	3.000	2.152	2.035	3.443	2.183	2.035	3.474	2.214	2.035	3.443	2.267	2.035	3.659	3.536	2.675	4.181	OCT
NOV	4.165	0.448	1.834	2.749	2.082	1.674	3.333	2.112	1.674	3.362	2.142	1.678	3.333	2.678	1.678	3.540	3.421	2.588	4.046	NOV
DEC	2.287	0.759	1.154	1.549	1.383	0.769	1.722	1.383	0.769	1.722	1.353	0.769	1.722	1.537	1.045	1.783	1.722	1.445	2.583	DEC
TOTAL		8.070		21.681	20.69	19.92	30.56	20.83	19.97	30.62	20.91	20.35	30.26	23.53	20.14	31.49	31.33	26.30	36.24	TOTAL
JAN 12					1.230	0.769	1.476	1.230	0.769	1.476	1.230	0.769	1.476	1.230	1.045	1.476	1.230	1.230	1.537	JAN 12
FEB 12					1.150	0.719	1.343	1.150	0.719	1.381	1.150	0.719	1.381	1.150	0.978	1.381	1.150	1.150	1.438	FEB 12

* Actual

MAINSTEM ENERGY

(GWh)

	Lower Basic FCST Jan-11	Upper Basic FCST Jan-11	Lower Basic FCST Feb-11	Upper Basic FCST Feb-11	Lower Basic FCST Mar-11	Upper Basic FCST Mar-11	Lower Basic FCST Apr-11	Upper Basic FCST Apr-11	Lower Basic FCST May-11	Upper Basic FCST May-11	
JAN	699	775	745 *	745 *	745 *	745 *	745 *	745 *	745 *	745 *	* JAN
FEB	642	748	646	777	655 *	655 *	655 *	655 *	655 *	655 *	* FEB
MAR	694	666	694	665	775	666	630 *	630 *	630 *	630 *	* MAR
APR	807	871	794	871	835	909	650	868	779 *	779 *	* APR
MAY	988	1369	989	1373	990	1351	971	1462	1528	1597	MAY
JUN	988	1386	990	1388	986	1390	978	1419	1405	1566	JUN
JUL	1049	1542	1050	1551	1046	1547	1040	1561	1395	1629	JUL
AUG	1036	1549	1038	1557	1034	1553	1028	1525	1356	1620	AUG
SEP	904	1465	905	1472	904	1468	911	1510	1244	1572	SEP
OCT	756	1407	757	1414	757	1404	775	1455	1053	1562	OCT
NOV	649	1354	650	1361	649	1349	668	1391	1029	1478	NOV
DEC	533	885	534	885	534	885	632	917	768	1164	DEC
TOTAL	9745	14017	9,792	14,059	9,910	13,922	9,683	14,138	12,587	14,997	TOTAL
JAN 12	632	942	629	942	628	942	736	927	811	942	JAN 12
FEB 12	575	861	572	861	572	861	673	848	744	868	FEB 12

* Actual

* Actual

MAINSTEM ENERGY

(GWh)

	MAX	MEAN	MIN	AVG	LAST	Jan-11	Feb-11	Mar-11	Apr-11	May-11	
	<u>67-10</u>	<u>67-10</u>	<u>67-10</u>	<u>100-YR</u>	<u>YEAR</u>	<u>FCST</u>	<u>FCST</u>	<u>FCST</u>	<u>FCST</u>	<u>FCST</u>	
JAN	915	710	425	729	558	729	745 *	745 *	745 *	745 *	JAN
FEB	912	622	307	637	442	700	726	655 *	655 *	655 *	FEB
MAR	1,040	637	308	554	352	692	691	710	630 *	630 *	MAR
APR	1,252	681	251	711	384	751	751	787	607	779 *	APR
MAY	1,344	779	285	928	664	962	953	944	994	1517	MAY
JUN	1,386	834	286	912	626	988	980	971	1128	1497	JUN
JUL	1,484	944	289	1,023	816	1070	1062	1052	1211	1567	JUL
AUG	1,520	1,000	365	1,053	970	1114	1106	1096	1219	1543	AUG
SEP	1,464	891	393	973	1094	999	1006	1013	1241	1501	SEP
OCT	1,492	810	310	928	1081	826	837	852	1162	1422	OCT
NOV	1,425	734	244	857	1001	820	830	844	1135	1367	NOV
DEC	<u>1,035</u>	<u>694</u>	<u>419</u>	<u>722</u>	<u>738</u>	<u>759</u>	<u>754</u>	<u>748</u>	<u>819</u>	<u>877</u>	DEC
TOTAL		9,336		10,027	8,726	10,410	10,441	10,417	11,546	14,100	TOTAL
JAN 12						816	811	816	821	820	JAN 12
FEB 12						746	742	745	752	752	FEB 12

* Actual

MAY 1, 2011 / BASIC CONDITION / 44.0 MAF / BALANCED
 FULL SERV / NAV SEAS +10 DAYS / NO MAY PULSE
 Elevations & Storages are for Date Shown
 Avg Discharge & Energy are Monthly Values
 Date of Study: May 1, 2011

	30-Apr-11	31-May	2011 30-Jun	31-Jul	31-Aug	30-Sep	31-Oct	30-Nov	31-Dec	2012 31-Jan	29-Feb
FORT PECK -----											
ELEV FTMSL	2240.9	2243.1	2247.9	2247.7	2245.3	2242.7	2240.4	2238.3	2236.8	2235.2	2234.0
DISCH KCFS	7.1	18.0	20.0	20.0	16.0	15.0	14.0	14.0	12.0	13.0	13.0
GARRISON -----											
ELEV FTMSL	1847.3	1847.4	1851.5	1852.2	1849.1	1845.7	1842.6	1840.0	1839.7	1838.4	1837.5
DISCH KCFS	14.9	43.0	49.0	49.0	46.0	43.0	38.0	37.7	19.0	25.0	25.0
OAHE -----											
ELEV FTMSL	1616.9	1616.3	1616.5	1615.6	1614.0	1612.0	1610.5	1608.4	1606.7	1606.9	1607.5
DISCH KCFS	26.0	50.0	52.6	54.1	52.5	54.1	45.9	48.6	27.6	23.5	22.7
BIG BEND -----											
ELEV FTMSL	1420.6	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0
DISCH KCFS	24.9	50.6	52.6	54.0	52.2	53.7	45.6	48.3	27.4	23.5	22.7
FORT RANDALL ----											
ELEV FTMSL	1359.0	1359.0	1359.0	1358.0	1355.2	1353.5	1345.0	1337.5	1339.3	1344.8	1350.0
DISCH KCFS	27.7	52.8	55.0	56.0	56.1	56.1	55.7	55.8	25.7	18.2	17.0
GAVINS POINT ----											
ELEV FTMSL	1205.3	1206.0	1206.0	1206.0	1206.5	1207.5	1207.5	1207.5	1207.5	1207.5	1206.0
DISCH KCFS	30.3	54.5	57.5	57.5	57.5	57.5	57.5	57.5	28.0	20.0	20.0
SYSTEM -----											
STORAGE 1000 AF	65497	65825	68542	68321	65822	63197	60477	58005	57153	56832	56812
ENERGY GWh	12861	1517	1497	1567	1543	1501	1422	1367	877	820	752
PEAK POWER MW		2377	2383	2386	2390	2381	2355	2290	2292	2313	2320

MAY 1, 2011 / LOWER BASIC / 38.8 MAF / BALANCED
 FULL SERV / NAV SEAS +10 DAYS / NO MAY PULSE

	30-Apr-11	31-May	2011 30-Jun	31-Jul	31-Aug	30-Sep	31-Oct	30-Nov	31-Dec	2012 31-Jan	29-Feb
FORT PECK -----											
ELEV FTMSL	2240.9	2241.9	2245.6	2245.3	2242.8	2240.9	2239.6	2238.3	2237.0	2235.4	2234.0
DISCH KCFS	7.1	18.0	17.0	16.0	14.0	11.3	9.0	9.0	9.0	11.0	11.0
GARRISON -----											
ELEV FTMSL	1847.3	1846.5	1849.9	1849.9	1846.8	1844.5	1843.2	1842.1	1840.8	1839.0	1837.5
DISCH KCFS	14.9	43.0	42.0	42.0	40.0	29.9	21.0	21.0	19.0	24.0	24.0
OAHE -----											
ELEV FTMSL	1616.9	1615.9	1616.0	1616.0	1615.7	1613.6	1611.4	1608.5	1607.4	1607.3	1607.5
DISCH KCFS	26.0	51.1	45.0	41.4	38.5	40.9	32.5	35.2	23.7	24.0	23.4
BIG BEND -----											
ELEV FTMSL	1420.6	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0
DISCH KCFS	24.9	51.7	45.0	41.2	38.1	40.3	32.1	34.8	23.5	24.0	23.4
FORT RANDALL ----											
ELEV FTMSL	1359.0	1359.0	1359.0	1358.5	1355.2	1353.5	1345.0	1337.5	1339.2	1344.8	1349.9
DISCH KCFS	27.7	53.5	46.8	42.2	42.5	42.5	42.1	42.2	21.8	18.6	17.5
GAVINS POINT ----											
ELEV FTMSL	1205.3	1206.0	1206.0	1206.0	1206.5	1207.5	1207.5	1207.5	1207.5	1207.5	1206.0
DISCH KCFS	30.3	54.5	49.0	43.5	43.5	43.5	43.5	43.5	23.5	20.0	20.0
SYSTEM -----											
STORAGE 1000 AF	65497	65091	67216	67071	65003	62927	60780	58764	57785	57160	56835
ENERGY GWh	11332	1528	1405	1395	1356	1244	1053	1029	768	811	744
PEAK POWER MW		2373	2381	2386	2400	2390	2366	2305	2299	2317	2320

MAY 1, 2011 / UPPER BASIC / 49.2 MAF / BALANCED
 FULL SERV / NAV SEAS +10 DAYS / NO MAY PULSE

	30-Apr-11	31-May	2011 30-Jun	31-Jul	31-Aug	30-Sep	31-Oct	30-Nov	31-Dec	2012 31-Jan	29-Feb
FORT PECK -----											
ELEV FTMSL	2240.9	2244.3	2250.0	2249.7	2246.1	2242.9	2240.1	2237.5	2236.3	2235.0	2234.0
DISCH KCFS	7.1	20.0	26.0	26.0	24.0	20.0	18.0	18.0	12.0	13.0	13.0
GARRISON -----											
ELEV FTMSL	1847.3	1848.0	1853.0	1854.0	1850.3	1846.2	1843.2	1840.9	1840.3	1838.7	1837.5
DISCH KCFS	14.9	48.5	61.5	61.5	61.5	54.2	44.0	42.1	22.0	28.0	28.0
OAHE -----											
ELEV FTMSL	1616.9	1616.1	1617.0	1616.9	1617.0	1615.4	1613.5	1610.8	1607.1	1607.1	1607.5
DISCH KCFS	26.0	57.4	62.2	62.4	59.4	63.8	55.7	58.2	41.2	27.8	27.1
BIG BEND -----											
ELEV FTMSL	1420.6	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0
DISCH KCFS	24.9	58.0	62.2	62.3	59.1	63.5	55.5	58.1	41.0	27.8	27.1
FORT RANDALL ----											
ELEV FTMSL	1359.0	1362.0	1362.0	1360.0	1355.2	1353.4	1344.9	1337.4	1339.2	1344.7	1349.9
DISCH KCFS	27.7	56.4	65.1	66.0	66.2	66.2	65.8	65.8	39.5	22.6	21.6
GAVINS POINT ----											
ELEV FTMSL	1205.3	1206.0	1206.0	1206.0	1206.5	1207.5	1207.5	1207.5	1207.5	1207.5	1206.0
DISCH KCFS	30.3	58.5	68.0	68.0	68.0	68.0	68.0	68.0	42.0	25.0	25.0
SYSTEM -----											
STORAGE 1000 AF	65497	66549	70073	70143	67468	64622	61617	58911	57392	56924	56807
ENERGY GWh	13996	1597	1566	1629	1620	1572	1562	1478	1164	942	868
PEAK POWER MW		2348	2356	2374	2401	2394	2369	2300	2296	2314	2320

DATE OF STUDY 05/03/11

MAY 1, 2011 / BASIC CONDITION / 44.0 MAF / BALANCED

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TIME OF STUDY 07:42:40

FULL SERV / NAV SEAS +10 DAYS / NO MAY PULSE
VALUES IN 1000 AF EXCEPT AS INDICATED

STUDY NO

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	30APR11		2011				VALUES IN 1000 AF EXCEPT AS INDICATED						
	INI-SUM	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	31JAN	29FEB
--FORT PECK--													
NAT INFLOW	8834	1913	2866	1452	500	333	385	192	90	102	329	312	360
DEPLETION	467	298	525	234	11	-75	-42	-41	-19	-22	-132	-153	-118
EVAPORATION	493			31	97	120	103	45	21	24	51		
MOD INFLOW	7874	1615	2341	1187	392	288	324	187	87	100	410	465	478
RELEASE	9382	1107	1190	1230	984	893	861	417	194	222	738	799	748
STOR CHANGE	-1508	508	1151	-43	-592	-605	-536	-230	-107	-122	-328	-334	-270
STORAGE	16292	16800	17951	17908	17316	16711	16175	15945	15839	15717	15388	15054	14784
ELEV FTMSL	2240.9	2243.1	2247.9	2247.7	2245.3	2242.7	2240.4	2239.3	2238.8	2238.3	2236.8	2235.2	2234.0
DISCH KCFS	7.1	18.0	20.0	20.0	16.0	15.0	14.0	14.0	14.0	14.0	12.0	13.0	13.0
POWER													
AVE POWER MW		167	170	172	171	169	168	166	166	165	161	164	163
PEAK POW MW		168	172	172	170	168	167	166	166	165	164	163	162
ENERGY GWH	1222.8	124.6	122.3	127.7	127.2	121.9	124.7	59.9	27.9	31.8	120.1	121.7	113.2
--GARRISON--													
NAT INFLOW	11664	1859	3999	2669	900	452	523	199	93	106	247	261	356
DEPLETION	983	177	765	602	107	-142	-25	-121	-56	-65	-115	-87	-57
CHAN STOR	-57	-103	-19		37	9	10			0	20	-10	
EVAPORATION	560			36	113	138	116	51	23	26	57		
REG INFLOW	19446	2685	4405	3261	1701	1358	1302	686	320	366	1062	1138	1161
RELEASE	22688	2644	2916	3013	2828	2561	2337	1131	528	587	1168	1537	1438
STOR CHANGE	-3242	41	1489	248	-1127	-1203	-1034	-445	-207	-221	-106	-400	-277
STORAGE	21349	21390	22880	23128	22000	20797	19763	19318	19111	18890	18784	18384	18107
ELEV FTMSL	1847.3	1847.4	1851.5	1852.2	1849.1	1845.7	1842.6	1841.3	1840.7	1840.0	1839.7	1838.4	1837.5
DISCH KCFS	14.9	43.0	49.0	49.0	46.0	43.0	38.0	38.0	38.0	37.0	19.0	25.0	25.0
POWER													
AVE POWER MW		501	503	504	504	501	473	466	463	451	239	313	311
PEAK POW MW		501	504	505	502	500	495	482	480	477	476	471	468
ENERGY GWH	3156.9	372.9	361.8	375.3	374.7	360.9	352.2	167.7	77.8	86.7	178.1	232.6	216.1
--OAHE--													
NAT INFLOW	1456	400	460	185	65	111	66	34	16	18		12	90
DEPLETION	583	71	145	173	116	28	-10	1	0	1	12	18	28
CHAN STOR	-30	-100	-21		11	11	19			4	71	-24	
EVAPORATION	547			35	108	133	114	51	23	26	56		
REG INFLOW	22984	2873	3209	2990	2680	2522	2318	1113	519	582	1171	1507	1500
RELEASE	26142	3074	3132	3328	3228	3218	2824	1356	666	869	1695	1445	1308
STOR CHANGE	-3158	-201	77	-338	-548	-696	-506	-244	-147	-287	-524	62	192
STORAGE	21990	21789	21866	21529	20981	20285	19779	19536	19389	19102	18578	18640	18832
ELEV FTMSL	1616.9	1616.3	1616.5	1615.6	1614.0	1612.0	1610.5	1609.7	1609.3	1608.4	1606.7	1606.9	1607.5
DISCH KCFS	26.0	50.0	52.6	54.1	52.5	54.1	45.9	45.6	48.0	54.7	27.6	23.5	22.7
POWER													
AVE POWER MW		664	693	708	685	695	600	592	617	683	355	302	293
PEAK POW MW		754	755	750	742	731	723	720	717	712	703	705	708
ENERGY GWH	4117.2	494.0	499.2	527.0	509.7	500.0	446.1	213.1	103.7	131.2	264.3	224.7	204.0
--BIG BEND--													
EVAPORATION	103			6	20	25	22	10	5	5	11		
REG INFLOW	26039	3074	3132	3322	3208	3193	2802	1347	662	863	1683	1445	1308
RELEASE	26076	3111	3132	3322	3208	3193	2802	1347	662	863	1683	1445	1308
STORAGE	1658	1621	1621	1621	1621	1621	1621	1621	1621	1621	1621	1621	1621
ELEV FTMSL	1420.6	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0
DISCH KCFS	24.9	50.6	52.6	54.0	52.2	53.7	45.6	45.3	47.7	54.4	27.4	23.5	22.7
POWER													
AVE POWER MW		228	236	245	244	254	221	223	235	267	137	115	109
PEAK POW MW		475	475	486	509	517	538	538	538	538	538	538	529
ENERGY GWH	1484.8	169.6	169.9	182.6	181.4	182.5	164.2	80.4	39.5	51.3	101.8	85.7	75.8
--FORT RANDALL--													
NAT INFLOW	530	147	152	57	39	38	5	3	1	2	12	25	49
DEPLETION	73	9	12	18	15	7	1	1	0	1	3	3	3
EVAPORATION	118			8	26	31	25	9	4	4	10		
REG INFLOW	26418	3249	3272	3352	3206	3193	2781	1339	659	860	1686	1467	1354
RELEASE	27174	3249	3272	3441	3450	3339	3425	1660	775	885	1580	1117	980
STOR CHANGE	-756			-89	-244	-146	-643	-321	-116	-26	106	350	374
STORAGE	3882	3882	3882	3793	3549	3402	2759	2438	2322	2296	2402	2752	3126
ELEV FTMSL	1359.0	1359.0	1359.0	1358.0	1355.2	1353.5	1345.0	1340.0	1338.0	1337.5	1339.3	1344.8	1350.0
DISCH KCFS	27.7	52.8	55.0	56.0	56.1	56.1	55.7	55.8	55.8	55.8	25.7	18.2	17.0
POWER													
AVE POWER MW		368	368	366	359	352	335	306	290	284	187	138	136
PEAK POW MW		368	368	364	355	349	317	294	285	283	294	319	339
ENERGY GWH	2129.8	273.7	264.6	272.1	267.4	253.3	249.2	110.1	48.7	54.5	139.4	102.4	94.3
--GAVINS POINT--													
NAT INFLOW	1295	186	178	137	115	111	120	59	28	31	100	100	130
DEPLETION	110	19	24	39	10	-5	2	5	2	3	10	1	
CHAN STOR	17	-49	-4	-2	0	0	1	0	0	0	56	14	2
EVAPORATION	36			2	6	9	8	3	2	2	4		
REG INFLOW	28340	3367	3422	3535	3549	3447	3536	1711	798	912	1722	1230	1112
RELEASE	28324	3351	3422	3535	3536	3422	3536	1711	798	912	1722	1230	1150
STOR CHANGE	16	16		13	25	25	25						-38
STORAGE	326	342	342	342	355	380	380	380	380	380	380	380	342
ELEV FTMSL	1205.3	1206.0	1206.0	1206.0	1206.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1206.0
DISCH KCFS	30.3	54.5	57.5	57.5	57.5	57.5	57.5	57.5	57.5	57.5	28.0	20.0	20.0
POWER													
AVE POWER MW		110	110	110	111	114	115	115	115	115	98	71	70
PEAK POW MW		111	110	110	112	115	115	115	115	115	117	117	114
ENERGY GWH	749.8	81.6	79.4	82.1	82.7	81.9	85.4	41.3	19.3	22.0	72.9	52.5	48.7
--GAVINS POINT - SIOUX CITY--													
NAT INFLOW	4082		900	600	350	250	200	80	37	43	120	40	92
DEPLETION	230		31	39	36	24	11	6	3	3	13	14	14
REGULATED FLOW AT SIOUX CITY													
KAF	32176	4685	4291	4096	3850	3648	3725	1785	833	952	1829	1256	1228
KCFS	76.2	72.1	66.6	62.6	61.3	60.6	60.6	60.0	60.0	60.0	29.7	20.4	21.4
--TOTAL--													
NAT INFLOW	27861	5875	8555	5100	1969	1295	1299	567	264	302	808	750	1077
DEPLETION	2446	610	1502	1105	295	-163	-63	-149	-69	-79	-209	-204	-130
CHAN STOR	-67	-252	-45	-2	48	20	29	0	0	3	149	-20	2
EVAPORATION	1856			118	370	456	386	170	78	88	189		
STORAGE	65497	65825	68542	68321	65822	63197	60477	59238	58661	58005	57153	56832	56812
SYSTEM POWER													
AVE POWER MW		2038	2080	2106	2074	2084	1911	1868	1886	1966	1178	1102	1081
PEAK POW MW		2377	2383	2386	2390	2381	2355	2314	2300	2290	2292	2313	2320
ENERGY GWH	12861.2	1516.5	1497.3	1566.7	1543.1	1500.6	1421.8	672.5	316.8	377.5	876.6	819.6	752.2
DAILY GWH		48.9	49.9	50.5	49.8	50.0	45.9	44.8	45.3	47.2	28.3	26.4	25.9
	INI-SUM	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	31JAN	29FEB

DATE OF STUDY 05/03/11

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TIME OF STUDY 08:50:00

FULL SERV / NAV SEAS +10 DAYS / NO MAY PULSE

STUDY NO

8

VALUES IN 1000 AF EXCEPT AS INDICATED

2012

	30APR11		2011				VALUES IN 1000 AF EXCEPT AS INDICATED						
	INI-SUM	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	31JAN	29FEB
--FORT PECK--													
NAT INFLOW	7067	1530	2293	1162	400	266	308	154	72	82	263	250	288
DEPLETION	370	195	405	219	1	-108	-90	-24	-11	-13	-80	-69	-55
EVAPORATION	607			38	119	147	126	56	26	30	64		
MOD INFLOW	6090	1335	1888	905	280	227	272	121	57	65	279	319	343
RELEASE	7588	1107	1012	984	861	673	553	268	125	143	553	676	633
STOR CHANGE	-1497	228	876	-79	-581	-446	-282	-147	-68	-78	-275	-357	-290
STORAGE	16292	16520	17397	17318	16737	16291	16009	15863	15794	15716	15442	15084	14795
ELEV FTMSL	2240.9	2241.9	2245.6	2245.3	2242.8	2240.9	2239.6	2239.0	2238.6	2238.3	2237.0	2235.4	2234.0
DISCH KCFS	7.1	18.0	17.0	16.0	14.0	11.3	9.0	9.0	9.0	9.0	9.0	11.0	11.0
POWER													
AVE POWER MW		167	169	170	169	156	125	125	124	124	124	149	148
PEAK POW MW		167	170	170	169	167	166	166	166	165	164	163	162
ENERGY GWH	1099.3	124.3	121.6	126.6	126.0	112.3	92.9	44.8	20.9	23.9	92.2	110.7	103.0
--GARRISON--													
NAT INFLOW	9331	1487	3199	2135	720	362	418	159	74	85	198	209	285
DEPLETION	880	111	524	493	111	-107	20	-93	-43	-50	-52	-22	-12
CHAN STOR	-38	-103	10	9	19	26	22					-20	
EVAPORATION	702			45	139	170	145	65	30	34	74		
REG INFLOW	15299	2379	3696	2591	1350	998	828	455	212	243	730	888	930
RELEASE	18532	2644	2499	2583	2460	1781	1291	625	292	333	1168	1476	1381
STOR CHANGE	-3232	-265	1197	8	-1110	-783	-463	-170	-79	-90	-439	-588	-451
STORAGE	21349	21084	22281	22289	21180	20396	19933	19763	19684	19594	19155	18567	18117
ELEV FTMSL	1847.3	1846.5	1849.9	1849.9	1846.8	1844.5	1843.2	1842.7	1842.4	1842.1	1840.8	1839.0	1837.5
DISCH KCFS	14.9	43.0	42.0	42.0	40.0	29.9	21.0	21.0	21.0	21.0	19.0	24.0	24.0
POWER													
AVE POWER MW		501	502	503	502	386	269	268	267	267	241	302	299
PEAK POW MW		501	503	503	501	499	498	495	491	487	480	474	468
ENERGY GWH	2764.6	372.7	361.4	374.5	373.6	277.8	200.3	96.4	44.9	51.3	179.1	224.5	208.0
--OAHE--													
NAT INFLOW	1166	320	368	148	52	89	53	27	13	14		10	72
DEPLETION	583	71	145	173	116	28	-10	1	0	1	12	18	28
CHAN STOR	-32	-100	4		7	36	33				8	-20	
EVAPORATION	698			44	138	172	146	64	30	33	71		
REG INFLOW	18385	2793	2726	2514	2264	1707	1242	587	274	314	1093	1448	1425
RELEASE	21535	3141	2675	2544	2366	2431	2001	958	480	656	1460	1478	1344
STOR CHANGE	-3149	-348	51	-30	-101	-724	-759	-372	-206	-342	-367	-30	80
STORAGE	21990	21642	21693	21663	21561	20837	20077	19706	19500	19157	18791	18761	18841
ELEV FTMSL	1616.9	1615.9	1616.0	1616.0	1615.7	1613.6	1611.4	1610.2	1609.6	1608.5	1607.4	1607.3	1607.5
DISCH KCFS	26.0	51.1	45.0	41.4	38.5	40.9	32.5	32.2	34.6	41.3	23.7	24.0	23.4
POWER													
AVE POWER MW		676	601	554	515	544	429	421	450	535	307	310	301
PEAK POW MW		752	752	752	750	740	728	722	719	713	707	707	708
ENERGY GWH	3441.1	502.8	433.0	412.2	383.4	391.3	319.5	151.7	75.7	102.7	228.5	230.5	209.8
--BIG BEND--													
EVAPORATION	129			8	24	31	27	12	6	7	14		
REG INFLOW	21406	3141	2675	2536	2341	2400	1974	946	475	650	1446	1478	1344
RELEASE	21443	3178	2675	2536	2341	2400	1974	946	475	650	1446	1478	1344
STORAGE	1658	1621	1621	1621	1621	1621	1621	1621	1621	1621	1621	1621	1621
ELEV FTMSL	1420.6	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0
DISCH KCFS	24.9	51.7	45.0	41.2	38.1	40.3	32.1	31.8	34.2	40.9	23.5	24.0	23.4
POWER													
AVE POWER MW		233	202	186	178	191	157	158	170	203	118	118	112
PEAK POW MW		475	475	480	509	517	538	538	538	538	538	538	529
ENERGY GWH	1221.2	173.2	145.2	138.6	132.5	137.5	116.5	57.0	28.6	38.9	87.6	87.6	77.9
--FORT RANDALL--													
NAT INFLOW	425	118	122	46	31	30	4	3	1	1	10	20	39
DEPLETION	73	9	12	18	15	7	1	1	0	1	3	3	3
EVAPORATION	147			10	32	39	31	12	5	5	12		
REG INFLOW	21649	3287	2785	2554	2325	2384	1946	935	470	644	1443	1495	1380
RELEASE	22411	3287	2785	2598	2614	2530	2590	1257	586	670	1342	1145	1006
STOR CHANGE	-762		0	-44	-289	-146	-643	-321	-116	-26	101	350	374
STORAGE	3882	3882	3882	3838	3549	3402	2759	2438	2321	2296	2396	2746	3120
ELEV FTMSL	1359.0	1359.0	1359.0	1358.5	1355.2	1353.5	1345.0	1340.0	1338.0	1337.5	1339.2	1344.8	1349.9
DISCH KCFS	27.7	53.5	46.8	42.2	42.5	42.5	42.1	42.2	42.2	42.2	21.8	18.6	17.5
POWER													
AVE POWER MW		368	366	348	343	336	319	297	284	280	160	141	139
PEAK POW MW		368	369	367	356	350	319	296	287	285	293	319	339
ENERGY GWH	2059.3	273.7	263.2	258.8	255.5	241.9	237.5	106.9	47.8	53.7	118.7	104.9	96.7
--GAVINS POINT--													
NAT INFLOW	1036	149	142	110	92	89	96	47	22	25	80	80	104
DEPLETION	110	19	24	39	10	-5	2	5	2	3	10	1	
CHAN STOR	17	-50	13	9	-1	0	1	0	0	0	38	6	2
EVAPORATION	45			3	8	11	10	4	2	2	5		
REG INFLOW	23309	3367	2916	2675	2688	2613	2675	1294	604	690	1445	1230	1112
RELEASE	23293	3351	2916	2675	2675	2588	2675	1294	604	690	1445	1230	1150
STOR CHANGE	16	16		13	25	25	380	380	380	380	380	380	-38
STORAGE	326	342	342	342	355	380	380	380	380	380	380	380	342
ELEV FTMSL	1205.3	1206.0	1206.0	1206.0	1206.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1206.0
DISCH KCFS	30.3	54.5	49.0	43.5	43.5	43.5	43.5	43.5	43.5	43.5	23.5	20.0	20.0
POWER													
AVE POWER MW		110	112	113	114	115	116	116	116	116	83	71	70
PEAK POW MW		111	112	113	114	116	116	116	116	116	117	117	114
ENERGY GWH	746.8	81.6	80.7	84.2	84.8	83.0	86.4	41.8	19.5	22.3	61.5	52.5	48.7
--GAVINS POINT - SIOUX CITY--													
NAT INFLOW	3266		720	480	280	200	160	64	30	34	96	32	74
DEPLETION	230		31	39	36	24	11	6	3	3	13	14	14
REGULATED FLOW AT SIOUX CITY													
KAF	26329	4411	3605	3116	2919	2764	2824	1352	631	721	1528	1248	1210
KCFS		71.7	60.6	50.7	47.5	46.5	45.9	45.4	45.4	45.4	24.8	20.3	21.0
--TOTAL--													
NAT INFLOW	22291	4700	6844	4081	1575	1036	1039	453	211	242	647	601	862
DEPLETION	2246	441	1141	981	289	-161	-66	-104	-49	-55	-94	-55	-22
CHAN STOR	-51	-253	26	18	25	62	56	0	0	-1	48	-33	2
EVAPORATION	2327			147	461	570	485	214	99	112	240		
STORAGE	65497	65091	67216	67071	65003	62927	60780	59770	59301	58764	57785	57160	56835
SYSTEM POWER													
AVE POWER MW		2054	1952	1875	1823	1727	1416	1385	1412	1524	1032	1090	1069
PEAK POW MW		2373	2381	2386	2400	2390	2366	2333	2317	2305	2299	2317	2320
ENERGY GWH	11332.2	1528.2	1405.1	1395.0	1355.9	1243.8	1053.2	498.7	237.3	292.7	767.7	810.6	744.1
DAILY GWH		49.3	46.8	45.0	43.7	41.5	34.0	33.2	33.9	36.6	24.8	26.1	25.7
	INI-SUM	31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	31JAN	29FEB

May 3rd, 2011 Reservoir Monthly Study Call

General Conditions:

1. Past Runoff

Last month's runoff was 267% of normal.

Ranging from about 578% in the Sioux City reach to 74% in the Gavins reach. Due to continued plains snow melt runoff and wet soil conditions.

Total system storage on April 30 – 65.5 MAF

2. Current Mountain Snow Pack (May thru July runoff)

141% of normal – above Ft. Peck

136% of normal – between Ft. Peck and Garrison

138% of normal – total above Garrison

Normally, peak accumulation occurs near April 15th. Currently, both reaches are nearing their peak snowpack.

3. Forecasted Annual Runoff

See forecast discussion included with the email.

Basic – 44.0 MAF (178% of Normal)

UB – 49.2 MAF

LB – 38.8 MAF

4. Gavins Releases

April – 30.3 kcfs.

Currently 45.0 kcfs. Will continue to release 45.0 kcfs through early May when flows will be increased to 57,500 cfs over several days due to the service level increase and continued evacuation of stored flood water.

Monthly Studies

1. Next Water-Year Balancing – Will be 100% full and balanced at Feb 2012 – All 3 conditions.

2. Navigation Service Levels

Flood control releases all year (including spillway releases) – all 3 conditions

3. Navigation Season Lengths

10 Day extension for all 3 conditions.

4. Spring Pulse

May – Cancelled due to service level increase.

5. Energy Generation

Last month – 779 MkWhrs actual – long-term average for March 711 MkWhrs

This year forecast – Basic Simulation – 14.1 BKWhrs. Long-term average approx 10.0 BKWhrs

6. Spring Forage Fish Spawn

Will “favor” Garrison this year contingent upon flood control operations.

Missouri River Basin
Calendar Year 2011
Forecasted

1-May-11

Reach Above	Fort Peck	Garrison	Oahe	Fort Randall	Gavins Point	Sioux City	Summation above Gavins Point	Summation above Sioux City	Accumulated Summation above Sioux City
Values in 1000 Acre Feet									
JAN 2011	(History)	299	120	86	67	273	1,003	1,276	1,276
NORMAL	431	261	12	25	100	40	710	750	750
DEPARTURE	119	38	108	61	-33	233	293	526	526
% OF NORM	138%	115%	998%	346%	67%	682%	141%	170%	170%
FEB 2011	580	457	318	217	236	524	1,808	2,333	3,609
NORMAL	360	356	90	49	130	92	985	1,077	1,827
DEPARTURE	220	101	228	168	106	432	823	1,256	1,782
% OF NORM	161%	128%	354%	443%	182%	570%	184%	217%	198%
MAR 2011	1,049	1,567	1,806	686	392	1,152	5,501	6,653	10,262
NORMAL	596	1,003	567	209	206	299	2,581	2,880	4,707
DEPARTURE	453	564	1,239	477	186	853	2,920	3,773	5,555
% OF NORM	176%	156%	319%	328%	190%	385%	213%	231%	218%
APR 2011	895	2,748	1,617	238	134	2,081	5,632	7,713	17,975
NORMAL	649	1,080	481	144	180	360	2,534	2,894	7,601
DEPARTURE	246	1,668	1,136	94	-46	1,721	3,098	4,819	10,374
% OF NORM	138%	254%	336%	165%	74%	578%	222%	267%	236%
MAY 2011	(Forecast)	1,859	400	147	186	1,370	4,505	5,875	23,850
NORMAL	1,913	1,245	312	147	186	292	2,971	3,263	10,864
DEPARTURE	832	614	88	0	0	1,078	1,534	2,612	12,986
% OF NORM	177%	149%	128%	100%	100%	469%	152%	180%	220%
JUN 2011	2,866	3,999	460	152	178	900	7,655	8,555	32,405
NORMAL	1,612	2,667	423	152	178	286	5,032	5,318	16,182
DEPARTURE	1,254	1,332	37	0	0	614	2,623	3,237	16,223
% OF NORM	178%	150%	109%	100%	100%	315%	152%	161%	200%
JUL 2011	1,452	2,669	185	57	137	600	4,500	5,100	37,505
NORMAL	819	1,776	179	57	137	218	2,968	3,186	19,368
DEPARTURE	633	893	6	0	0	382	1,532	1,914	18,137
% OF NORM	177%	150%	103%	100%	100%	275%	152%	160%	194%
AUG 2011	500	900	65	39	115	350	1,619	1,969	39,474
NORMAL	353	604	65	39	115	131	1,176	1,307	20,675
DEPARTURE	147	296	0	0	0	219	443	662	18,799
% OF NORM	142%	149%	100%	100%	100%	267%	138%	151%	191%
SEP 2011	333	452	111	38	111	250	1,045	1,295	40,769
NORMAL	333	452	111	38	111	99	1,045	1,144	21,819
DEPARTURE	0	0	0	0	0	151	0	151	18,950
% OF NORM	100%	100%	100%	100%	100%	253%	100%	113%	187%
OCT 2011	385	523	66	5	120	200	1,099	1,299	42,068
NORMAL	385	523	66	5	120	78	1,099	1,177	22,996
DEPARTURE	0	0	0	0	0	122	0	122	19,072
% OF NORM	100%	100%	100%	100%	100%	256%	100%	110%	183%
NOV 2011	384	398	67	6	118	160	973	1,133	43,201
NORMAL	384	398	67	6	118	76	973	1,049	24,045
DEPARTURE	0	0	0	0	0	84	0	84	19,156
% OF NORM	100%	100%	100%	100%	100%	211%	100%	108%	180%
DEC 2011	329	247	0	12	100	120	688	808	44,009
NORMAL	329	247	0	12	100	52	688	740	24,785
DEPARTURE	0	0	0	0	0	68	0	68	19,224
% OF NORM	100%	100%	100%	100%	100%	231%	100%	109%	178%
Calendar Year Totals									
NORMAL	11,117	16,118	5,216	1,684	1,894	7,980	36,029	44,009	
DEPARTURE	7,213	10,612	2,373	883	1,681	2,023	22,762	24,785	
% OF NORM	3,904	5,506	2,843	801	213	5,957	13,267	19,224	
	154%	152%	220%	191%	113%	394%	158%	178%	

[REDACTED] NWO

From: [REDACTED] NWK
Sent: Tuesday, May 03, 2011 11:45 AM
To: Farhat, Jody S NWD02
Cc: [REDACTED] NWD02; [REDACTED] NWK; [REDACTED] NWK
Subject: Truman Reservoir Releases (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Jody,

In our continued efforts to assist with the Mississippi River flooding we will limit releases from Truman to the Firm Power requirement of 1200 cfs. After reviewing the Osage River basin conditions, we are comfortable with maintaining the 1200 cfs release for the remainder of this work week. Truman reservoir is currently at 10.2% of Flood Control Pool occupied and the forecast for Friday is 12.5% Flood Control Pool occupied.

We will re-evaluate Friday for the weekend. We continue to monitor the forecasts on the Mississippi and Ohio Rivers.

[REDACTED]
[REDACTED]
USACE - Kansas City District
[REDACTED]

Classification: UNCLASSIFIED
Caveats: NONE

[REDACTED] NWO

From: [REDACTED] NWD02
Sent: Tuesday, May 03, 2011 10:07 AM
To: Farhat, Jody S NWD02; [REDACTED] NWD02; [REDACTED] NWD02; [REDACTED] NWO; [REDACTED] NWO; [REDACTED] NWO; [REDACTED] NWO; [REDACTED] NWO; [REDACTED] NWD02; [REDACTED] J NWO; [REDACTED] NWO; [REDACTED] NWO; [REDACTED] HQ02@NWO; [REDACTED] NWO; [REDACTED] NWO; [REDACTED] NWO; [REDACTED] NWD02; [REDACTED] NWO; [REDACTED] NWO; [REDACTED] M NWO; [REDACTED] NWO; [REDACTED] S NWO; [REDACTED] NWD02; [REDACTED] H NWO; [REDACTED] M NWO; [REDACTED] J NWO; [REDACTED] NWO; [REDACTED] NWO; [REDACTED] NWD02; [REDACTED] W NWO; [REDACTED] H NWO; [REDACTED] WO; [REDACTED] IWO; [REDACTED] NWO; [REDACTED] M NWO; [REDACTED] NWO; [REDACTED] I NWO; [REDACTED] NWO; [REDACTED] WO; [REDACTED] NWO; [REDACTED] NWO; [REDACTED] NWD02; [REDACTED] NWO; [REDACTED] NWO; [REDACTED] NWO; [REDACTED] NWO; [REDACTED] NWD02; [REDACTED] NWO; [REDACTED] J NWO; [REDACTED] NWO; [REDACTED] NWO; [REDACTED] NWO; [REDACTED] IWO; [REDACTED] R NWO; [REDACTED] WO; [REDACTED] NWO; [REDACTED] VO; [REDACTED] NWK; [REDACTED] NWK; [REDACTED] D NWK
Subject: *Resend* May 2011 Monthly Reservoir Studies - Conf call Tue May 3rd at 11:00 am Central Time - Draft studies attached (UNCLASSIFIED)
Attachments: 2011May Runoff Forecast Summary.docx; resfcstmay.pdf; May.2011-notes.docx

Classification: UNCLASSIFIED
Caveats: NONE

I neglected to include the more detailed sheets for the 3 conditions in the draft studies. I have also included the notes that I read during the conference call.

Attached are the 2011 May runoff forecast summary and the draft studies. Also included is a link to the calendar year forecast of runoff for the Missouri River basin upstream of Sioux City.

<http://www.nwd-mr.usace.army.mil/rcc/reports/cyfcst.html>

Phone No. 877-336-1839
Access Code 6736351

Note: If prompted for a security code, type in 1234 followed by the # sign.

[REDACTED]
[REDACTED]
Missouri River Basin Water Management
U.S. Army Corps of Engineers

Classification: UNCLASSIFIED
Caveats: NONE

The May 1 forecast for the 2011 runoff above Sioux City, IA is **44.0 MAF** (178% of normal). The May 1 forecast for the 2011 runoff above Gavins Point Dam is **36.0 MAF** (158% of normal).

April 2011 runoff above Sioux City, IA was 7713 kaf, 267% of normal. April 2011 runoff above Gavins Point Dam was 5632 kaf, 222% of normal.

April 2011 runoff:

Fort Peck - 895 kaf (138% of normal),
Garrison - 2748 kaf (254% of normal),
Oahe - 1617 kaf (336% of normal),
Fort Randall - 238 kaf (165% of normal),
Gavins Point - 134 kaf (74% of normal), and
Gavins to Sioux City - 2081 kaf (578% of normal).

While the bulk of the runoff in April occurred from plains snowmelt, precipitation in the basin during April was well-above normal above the upper three projects and slightly above normal between Oahe and Sioux City. As of May 1, 2011 the accumulated runoff above Sioux City, IA was 18.0 maf (236% of normal), while above Gavins Point Dam, the accumulated runoff was 15.9 maf (220% of normal).

During the critical runoff months of May, June and July, forecasted runoff into the mainstem reservoir system above Gavins Point are forecasted to total 4505 kaf (the equivalent of 73 kcfs/day) in May, 7655 kaf (124 kcfs/day) in June, and 4500 kaf (73 kcfs/day) in July.

As of May 1, 2011 the Fort Peck basin contained 140% of the normal April 15 peak mountain snowpack, while the Fort Peck to Garrison basin contained 136% of the normal April 15 peak mountain snowpack. Total forecasted runoff from May–July above Fort Peck is 6230 kaf (177% of normal). This forecast would rank the May–July runoff period above Fort Peck as the 5th highest of record since 1898. Likewise, total runoff forecast to occur during May–July in the Fort Peck to Garrison reach is 8527 kaf (150% of normal). This forecast would rank the May–July runoff period from Garrison to Fort Peck as the 10th highest of record since 1898.

At Oahe we expect runoff volumes in May to be greater than normal, but slowly recede to normal by August. Runoff volumes into Fort Randall and Gavins Point are expected to be normal.

In the Gavins Point to Sioux City reach, we expect May runoff from the James, Vermillion and Big Sioux Rivers to contribute 1370 kaf (20,600 cfs/day). We expect subsequent runoff volumes in this reach to be above normal through the remainder of the calendar year due to elevated contributions from the James and Big Sioux River basins from persistent wet soil conditions. The forecasted calendar year runoff in the Gavins to Sioux City reach is expected to be 7980 kaf, almost 400% of normal, but less than the 520% of normal received in 2010.

MAY 1, 2011 / BASIC CONDITION / 44.0 MAF / BALANCED
 FULL SERV / NAV SEAS +10 DAYS / NO MAY PULSE
 Elevations & Storages are for Date Shown
 Avg Discharge & Energy are Monthly Values
 Date of Study: May 1, 2011

	30-Apr-11	31-May	2011 30-Jun	31-Jul	31-Aug	30-Sep	31-Oct	30-Nov	31-Dec	2012 31-Jan	29-Feb
FORT PECK ----- ELEV FTMSL DISCH KCFS	2240.9 7.1	2243.1 18.0	2247.9 20.0	2247.7 20.0	2245.3 16.0	2242.7 15.0	2240.4 14.0	2238.3 14.0	2236.8 12.0	2235.2 13.0	2234.0 13.0
GARRISON ----- ELEV FTMSL DISCH KCFS	1847.3 14.9	1847.4 43.0	1851.5 49.0	1852.2 49.0	1849.1 46.0	1845.7 43.0	1842.6 38.0	1840.0 37.7	1839.7 19.0	1838.4 25.0	1837.5 25.0
OAHE ----- ELEV FTMSL DISCH KCFS	1616.9 26.0	1616.3 50.0	1616.5 52.6	1615.6 54.1	1614.0 52.5	1612.0 54.1	1610.5 45.9	1608.4 48.6	1606.7 27.6	1606.9 23.5	1607.5 22.7
BIG BEND ----- ELEV FTMSL DISCH KCFS	1420.6 24.9	1420.0 50.6	1420.0 52.6	1420.0 54.0	1420.0 52.2	1420.0 53.7	1420.0 45.6	1420.0 48.3	1420.0 27.4	1420.0 23.5	1420.0 22.7
FORT RANDALL ---- ELEV FTMSL DISCH KCFS	1359.0 27.7	1359.0 52.8	1359.0 55.0	1358.0 56.0	1355.2 56.1	1353.5 56.1	1345.0 55.7	1337.5 55.8	1339.3 25.7	1344.8 18.2	1350.0 17.0
GAVINS POINT ---- ELEV FTMSL DISCH KCFS	1205.3 30.3	1206.0 54.5	1206.0 57.5	1206.0 57.5	1206.5 57.5	1207.5 57.5	1207.5 57.5	1207.5 57.5	1207.5 28.0	1207.5 20.0	1206.0 20.0
SYSTEM ----- STORAGE 1000 AF ENERGY GWh PEAK POWER MW	65497 12861	65825 1517 2377	68542 1497 2383	68321 1567 2386	65822 1543 2390	63197 1501 2381	60477 1422 2355	58005 1367 2290	57153 877 2292	56832 820 2313	56812 752 2320

MAY 1, 2011 / LOWER BASIC / 38.8 MAF / BALANCED
 FULL SERV / NAV SEAS +10 DAYS / NO MAY PULSE

	30-Apr-11	31-May	2011 30-Jun	31-Jul	31-Aug	30-Sep	31-Oct	30-Nov	31-Dec	2012 31-Jan	29-Feb
FORT PECK ----- ELEV FTMSL DISCH KCFS	2240.9 7.1	2241.9 18.0	2245.6 17.0	2245.3 16.0	2242.8 14.0	2240.9 11.3	2239.6 9.0	2238.3 9.0	2237.0 9.0	2235.4 11.0	2234.0 11.0
GARRISON ----- ELEV FTMSL DISCH KCFS	1847.3 14.9	1846.5 43.0	1849.9 42.0	1849.9 42.0	1846.8 40.0	1844.5 29.9	1843.2 21.0	1842.1 21.0	1840.8 19.0	1839.0 24.0	1837.5 24.0
OAHE ----- ELEV FTMSL DISCH KCFS	1616.9 26.0	1615.9 51.1	1616.0 45.0	1616.0 41.4	1615.7 38.5	1613.6 40.9	1611.4 32.5	1608.5 35.2	1607.4 23.7	1607.3 24.0	1607.5 23.4
BIG BEND ----- ELEV FTMSL DISCH KCFS	1420.6 24.9	1420.0 51.7	1420.0 45.0	1420.0 41.2	1420.0 38.1	1420.0 40.3	1420.0 32.1	1420.0 34.8	1420.0 23.5	1420.0 24.0	1420.0 23.4
FORT RANDALL ---- ELEV FTMSL DISCH KCFS	1359.0 27.7	1359.0 53.5	1359.0 46.8	1358.5 42.2	1355.2 42.5	1353.5 42.5	1345.0 42.1	1337.5 42.2	1339.2 21.8	1344.8 18.6	1349.9 17.5
GAVINS POINT ---- ELEV FTMSL DISCH KCFS	1205.3 30.3	1206.0 54.5	1206.0 49.0	1206.0 43.5	1206.5 43.5	1207.5 43.5	1207.5 43.5	1207.5 43.5	1207.5 23.5	1207.5 20.0	1206.0 20.0
SYSTEM ----- STORAGE 1000 AF ENERGY GWh PEAK POWER MW	65497 11332	65091 1528 2373	67216 1405 2381	67071 1395 2386	65003 1356 2400	62927 1244 2390	60780 1053 2366	58764 1029 2305	57785 768 2299	57160 811 2317	56835 744 2320

MAY 1, 2011 / UPPER BASIC / 49.2 MAF / BALANCED
 FULL SERV / NAV SEAS +10 DAYS / NO MAY PULSE

	30-Apr-11	31-May	2011 30-Jun	31-Jul	31-Aug	30-Sep	31-Oct	30-Nov	31-Dec	2012 31-Jan	29-Feb
FORT PECK ----- ELEV FTMSL DISCH KCFS	2240.9 7.1	2244.3 20.0	2250.0 26.0	2249.7 26.0	2246.1 24.0	2242.9 20.0	2240.1 18.0	2237.5 18.0	2236.3 12.0	2235.0 13.0	2234.0 13.0
GARRISON ----- ELEV FTMSL DISCH KCFS	1847.3 14.9	1848.0 48.5	1853.0 61.5	1854.0 61.5	1850.3 61.5	1846.2 54.2	1843.2 44.0	1840.9 42.1	1840.3 22.0	1838.7 28.0	1837.5 28.0
OAHE ----- ELEV FTMSL DISCH KCFS	1616.9 26.0	1616.1 57.4	1617.0 62.2	1616.9 62.4	1617.0 59.4	1615.4 63.8	1613.5 55.7	1610.8 58.2	1607.1 41.2	1607.1 27.8	1607.5 27.1
BIG BEND ----- ELEV FTMSL DISCH KCFS	1420.6 24.9	1420.0 58.0	1420.0 62.2	1420.0 62.3	1420.0 59.1	1420.0 63.5	1420.0 55.5	1420.0 58.1	1420.0 41.0	1420.0 27.8	1420.0 27.1
FORT RANDALL ---- ELEV FTMSL DISCH KCFS	1359.0 27.7	1362.0 56.4	1362.0 65.1	1360.0 66.0	1355.2 66.2	1353.4 66.2	1344.9 65.8	1337.4 65.8	1339.2 39.5	1344.7 22.6	1349.9 21.6
GAVINS POINT ---- ELEV FTMSL DISCH KCFS	1205.3 30.3	1206.0 58.5	1206.0 68.0	1206.0 68.0	1206.5 68.0	1207.5 68.0	1207.5 68.0	1207.5 68.0	1207.5 42.0	1207.5 25.0	1206.0 25.0
SYSTEM ----- STORAGE 1000 AF ENERGY GWh PEAK POWER MW	65497 13996	66549 1597 2348	70073 1566 2356	70143 1629 2374	67468 1620 2401	64622 1572 2394	61617 1562 2369	58911 1478 2300	57392 1164 2296	56924 942 2314	56807 868 2320

DATE OF STUDY 05/03/11			MAY 1, 2011 / BASIC CONDITION / 44.0 MAF / BALANCED										99001	9901	4	PAGE	1	
TIME OF STUDY 07:42:40			FULL SERV / NAV SEAS +10 DAYS / NO MAY PULSE										STUDY NO				6	
			VALUES IN 1000 AF EXCEPT AS INDICATED															
30APR11			2011												2012			
INI-SUM			31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	31JAN	29FEB				
--FORT PECK--																		
NAT INFLOW	8834	1913	2866	1452	500	333	385	192	90	102	329	312	360					
DEPLETION	467	298	525	234	11	-75	-42	-41	-19	-22	-132	-153	-118					
EVAPORATION	493			31	97	120	103	45	21	24	51							
MOD INFLOW	7874	1615	2341	1187	392	288	324	187	87	100	410	465	478					
RELEASE	9382	1107	1190	1230	984	893	861	417	194	222	738	799	748					
STOR CHANGE	-1508	508	1151	-43	-592	-605	-536	-230	-107	-122	-328	-334	-270					
STORAGE	16292	16800	17951	17908	17316	16711	16175	15945	15839	15717	15388	15054	14784					
ELEV FTMSL	2240.9	2243.1	2247.9	2247.7	2245.3	2242.7	2240.4	2239.3	2238.8	2238.3	2236.8	2235.2	2234.0					
DISCH KCFS	7.1	18.0	20.0	20.0	16.0	15.0	14.0	14.0	14.0	14.0	12.0	13.0	13.0					
POWER																		
AVE POWER MW		167	170	172	171	169	168	166	166	165	161	164	163					
PEAK POW MW		168	172	172	170	168	167	166	166	165	164	163	162					
ENERGY GWH	1222.8	124.6	122.3	127.7	127.2	121.9	124.7	59.9	27.9	31.8	120.1	121.7	113.2					
--GARRISON--																		
NAT INFLOW	11664	1859	3999	2669	900	452	523	199	93	106	247	261	356					
DEPLETION	983	177	765	602	107	-142	-25	-121	-56	-65	-115	-87	-57					
CHAN STOR	-57	-103	-19		37	9	10			0	20	-10						
EVAPORATION	560			36	113	138	116	51	23	26	57							
REG INFLOW	19446	2685	4405	3261	1701	1358	1302	686	320	366	1062	1138	1161					
RELEASE	22688	2644	2916	3013	2828	2561	2337	1131	528	587	1168	1537	1438					
STOR CHANGE	-3242	41	1489	248	-1127	-1203	-1034	-445	-207	-221	-106	-400	-277					
STORAGE	21349	21390	22880	23128	22000	20797	19763	19318	19111	18890	18784	18384	18107					
ELEV FTMSL	1847.3	1847.4	1851.5	1852.2	1849.1	1845.7	1842.6	1841.3	1840.7	1840.0	1839.7	1838.4	1837.5					
DISCH KCFS	14.9	43.0	49.0	49.0	46.0	43.0	38.0	38.0	38.0	37.0	19.0	25.0	25.0					
POWER																		
AVE POWER MW		501	503	504	504	501	473	466	463	451	239	313	311					
PEAK POW MW		501	504	505	502	500	495	482	480	477	476	471	468					
ENERGY GWH	3156.9	372.9	361.8	375.3	374.7	360.9	352.2	167.7	77.8	86.7	178.1	232.6	216.1					
--OAHE--																		
NAT INFLOW	1456	400	460	185	65	111	66	34	16	18		12	90					
DEPLETION	583	71	145	173	116	28	-10	1	0	1	12	18	28					
CHAN STOR	-30	-100	-21		11	11	19			4	71	-24						
EVAPORATION	547			35	108	133	114	51	23	26	56							
REG INFLOW	22984	2873	3209	2990	2680	2522	2318	1113	519	582	1171	1507	1500					
RELEASE	26142	3074	3132	3328	3228	3218	2824	1356	666	869	1695	1445	1308					
STOR CHANGE	-3158	-201	77	-338	-548	-696	-506	-244	-147	-287	-524	62	192					
STORAGE	21990	21789	21866	21529	20981	20285	19779	19536	19389	19102	18578	18640	18832					
ELEV FTMSL	1616.9	1616.3	1616.5	1615.6	1614.0	1612.0	1610.5	1609.7	1609.3	1608.4	1606.7	1606.9	1607.5					
DISCH KCFS	26.0	50.0	52.6	54.1	52.5	54.1	45.9	45.6	48.0	54.7	27.6	23.5	22.7					
POWER																		
AVE POWER MW		664	693	708	685	695	600	592	617	683	355	302	293					
PEAK POW MW		754	755	750	742	731	723	720	717	712	703	705	708					
ENERGY GWH	4117.2	494.0	499.2	527.0	509.7	500.0	446.1	213.1	103.7	131.2	264.3	224.7	204.0					
--BIG BEND--																		
EVAPORATION	103			6	20	25	22	10	5	5	11							
REG INFLOW	26039	3074	3132	3322	3208	3193	2802	1347	662	863	1683	1445	1308					
RELEASE	26076	3111	3132	3322	3208	3193	2802	1347	662	863	1683	1445	1308					
STORAGE	1658	1621	1621	1621	1621	1621	1621	1621	1621	1621	1621	1621	1621					
ELEV FTMSL	1420.6	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0					
DISCH KCFS	24.9	50.6	52.6	54.0	52.2	53.7	45.6	45.3	47.7	54.4	27.4	23.5	22.7					
POWER																		
AVE POWER MW		228	236	245	244	254	221	223	235	267	137	115	109					
PEAK POW MW		475	475	486	509	517	538	538	538	538	538	538	529					
ENERGY GWH	1484.8	169.6	169.9	182.6	181.4	182.5	164.2	80.4	39.5	51.3	101.8	85.7	75.8					
--FORT RANDALL--																		
NAT INFLOW	530	147	152	57	39	38	5	3	1	2	12	25	49					
DEPLETION	73	9	12	18	15	7	1	1	0	1	3	3	3					
EVAPORATION	118			8	26	31	25	9	4	4	10							
REG INFLOW	26418	3249	3272	3352	3206	3193	2781	1339	659	860	1686	1467	1354					
RELEASE	27174	3249	3272	3441	3450	3339	3425	1660	775	885	1580	1117	980					
STOR CHANGE	-756			-89	-244	-146	-643	-321	-116	-26	106	350	374					
STORAGE	3882	3882	3882	3793	3549	3402	2759	2438	2322	2296	2402	2752	3126					
ELEV FTMSL	1359.0	1359.0	1359.0	1358.0	1355.2	1353.5	1345.0	1340.0	1338.0	1337.5	1339.3	1344.8	1350.0					
DISCH KCFS	27.7	52.8	55.0	56.0	56.1	56.1	55.7	55.8	55.8	55.8	25.7	18.2	17.0					
POWER																		
AVE POWER MW		368	368	366	359	352	335	306	290	284	187	138	136					
PEAK POW MW		368	368	364	355	349	317	294	285	283	294	319	339					
ENERGY GWH	2129.8	273.7	264.6	272.1	267.4	253.3	249.2	110.1	48.7	54.5	139.4	102.4	94.3					
--GAVINS POINT--																		
NAT INFLOW	1295	186	178	137	115	111	120	59	28	31	100	100	130					
DEPLETION	110	19	24	39	10	-5	2	5	2	3	10	1						
CHAN STOR	17	-49	-4	-2	0	0	1	0	0	0	56	14	2					
EVAPORATION	36			2	6	9	8	3	2	2	4							
REG INFLOW	28340	3367	3422	3535	3549	3447	3536	1711	798	912	1722	1230	1112					
RELEASE	28324	3351	3422	3535	3536	3422	3536	1711	798	912	1722	1230	1150					
STOR CHANGE	16	16		13	25								-38					
STORAGE	326	342	342	342	355	380	380	380	380	380	380	380	342					
ELEV FTMSL	1205.3	1206.0	1206.0	1206.0	1206.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1206.0					
DISCH KCFS	30.3	54.5	57.5	57.5	57.5	57.5	57.5	57.5	57.5	57.5	28.0	20.0	20.0					
POWER																		
AVE POWER MW		110	110	110	111	114	115	115	115	115	98	71	70					
PEAK POW MW		111	110	110	112	115	115	115	115	115	117	117	114					
ENERGY GWH	749.8	81.6	79.4	82.1	82.7	81.9	85.4	41.3	19.3	22.0	72.9	52.5	48.7					
--GAVINS POINT - SIOUX CITY--																		
NAT INFLOW	4082	1370	900	600	350	250	200	80	37	43	120	40	92					
DEPLETION	230	36	31	39	36	24	11	6	3	3	13	14	14					
REGULATED FLOW	32176	4685	4291	4096	3850	3648	3725	1785	833	952	1829	1256	1228					
KAF		76.2	72.1	66.6	62.6	61.3	60.0	60.0	60.0	60.0	29.7	20.4	21.4					
KCFS																		
--TOTAL--																		
NAT INFLOW	27861	5875	8555	5100	1969	1295	1299	567	264	302	808	750	1077					
DEPLETION	2446	610	1502	1105	295	-163	-63	-149	-69	-79	-209	-204	-130					
CHAN STOR	-67	-252	-45	-2	48	20	29	0	0	3	149	-20	2					
EVAPORATION	1856			118	370	456	386	170	78	88	189							
STORAGE	65497	65825	68542	68321	65822	63197	60477	59238	58661	58005	57153	56832	56812					
SYSTEM POWER																		
AVE POWER MW		2038	2080	2106	2074	2084	1911	1868	1886	1966	1178	1102	1081					
PEAK POW MW		2377	2383	2386	2390	2381	2355	2314	2300	2290	2292	2313	2320					
ENERGY GWH	12861.2	1516.5	1497.3	1566.7	1543.1	1500.6	1421.8	672.5	316.8	377.5	876.6	819.6	752.2					
DAILY GWH		48.9	49.9	50.5	49.8	50.0	45.9	44.8	45.3	47.2	28.3	26.4	25.9					
INI-SUM			31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	31JAN	29FEB				

DATE OF STUDY 05/03/11

MAY 1, 2011 / LOWER BASIC / 38.8 MAF / BALANCED

99001 9901 9901 PAGE

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TIME OF STUDY 08:50:00

FULL SERV / NAV SEAS +10 DAYS / NO MAY PULSE
VALUES IN 1000 AF EXCEPT AS INDICATED

STUDY NO

8

	30APR11	31MAY	2011	31JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	31JAN	29FEB
	INI-SUM													
2012														
--FORT PECK--														
NAT INFLOW	7067	1530	2293	1162	400	266	308	154	72	82	263	250	288	
DEPLETION	370	195	405	219	1	-108	-90	-24	-11	-13	-80	-69	-55	
EVAPORATION	607			38	119	147	126	56	26	30	64			
MOD INFLOW	6090	1335	1888	905	280	227	272	121	57	65	279	319	343	
RELEASE	7588	1107	1012	984	861	673	553	268	125	143	553	676	633	
STOR CHANGE	-1497	228	876	-79	-581	-446	-282	-147	-68	-78	-275	-357	-290	
STORAGE	16292	16520	17397	17318	16737	16291	16009	15863	15794	15716	15442	15084	14795	
ELEV FTMSL	2240.9	2241.9	2245.6	2245.3	2242.8	2240.9	2239.6	2239.0	2238.6	2238.3	2237.0	2235.4	2234.0	
DISCH KCFS	7.1	18.0	17.0	16.0	14.0	11.3	9.0	9.0	9.0	9.0	9.0	11.0	11.0	
POWER														
AVE POWER MW		167	169	170	169	156	125	125	124	124	124	149	148	
PEAK POW MW		167	170	170	169	167	166	166	166	165	164	163	162	
ENERGY GWH	1099.3	124.3	121.6	126.6	126.0	112.3	92.9	44.8	20.9	23.9	92.2	110.7	103.0	
--GARRISON--														
NAT INFLOW	9331	1487	3199	2135	720	362	418	159	74	85	198	209	285	
DEPLETION	880	111	524	493	111	-107	20	-93	-43	-50	-52	-22	-12	
CHAN STOR	-38	-103	10	9	19	26	22					-20		
EVAPORATION	702			45	139	170	145	65	30	34	74			
REG INFLOW	15299	2379	3696	2591	1350	998	828	455	212	243	730	888	930	
RELEASE	18532	2644	2499	2583	2460	1781	1291	625	292	333	1168	1476	1381	
STOR CHANGE	-3232	-265	1197	8	-1110	-783	-463	-170	-79	-90	-439	-588	-451	
STORAGE	21349	21084	22281	22289	21180	20396	19933	19763	19684	19594	19155	18567	18117	
ELEV FTMSL	1847.3	1846.5	1849.9	1849.9	1846.8	1844.5	1843.2	1842.7	1842.4	1842.1	1840.8	1839.0	1837.5	
DISCH KCFS	14.9	43.0	42.0	42.0	40.0	29.9	21.0	21.0	21.0	21.0	19.0	24.0	24.0	
POWER														
AVE POWER MW		501	502	503	502	386	269	268	267	267	241	302	299	
PEAK POW MW		501	503	503	501	499	498	495	491	487	480	474	468	
ENERGY GWH	2764.6	372.7	361.4	374.5	373.6	277.8	200.3	96.4	44.9	51.3	179.1	224.5	208.0	
--OAH--														
NAT INFLOW	1166	320	368	148	52	89	53	27	13	14		10	72	
DEPLETION	583	71	145	173	116	28	-10	1	0	1	12	18	28	
CHAN STOR	-32	-100	4		7	36	33				8	-20		
EVAPORATION	698			44	138	172	146	64	30	33	71			
REG INFLOW	18385	2793	2726	2514	2264	1707	1242	587	274	314	1093	1448	1425	
RELEASE	21535	3141	2675	2544	2366	2431	2001	958	480	656	1460	1478	1344	
STOR CHANGE	-3149	-348	51	-30	-101	-724	-759	-372	-206	-342	-367	-30	80	
STORAGE	21990	21642	21693	21663	21561	20837	20077	19706	19500	19157	18791	18761	18841	
ELEV FTMSL	1616.9	1615.9	1616.0	1616.0	1615.7	1613.6	1611.4	1610.2	1609.6	1608.5	1607.4	1607.3	1607.5	
DISCH KCFS	26.0	51.1	45.0	41.4	38.5	40.9	32.5	32.2	34.6	41.3	23.7	24.0	23.4	
POWER														
AVE POWER MW		676	601	554	515	544	429	421	450	535	307	310	301	
PEAK POW MW		752	752	752	750	740	728	722	719	713	707	707	708	
ENERGY GWH	3441.1	502.8	433.0	412.2	383.4	391.3	319.5	151.7	75.7	102.7	228.5	230.5	209.8	
--BIG BEND--														
EVAPORATION	129			8	24	31	27	12	6	7	14			
REG INFLOW	21406	3141	2675	2536	2341	2400	1974	946	475	650	1446	1478	1344	
RELEASE	21443	3178	2675	2536	2341	2400	1974	946	475	650	1446	1478	1344	
STORAGE	1658	1621	1621	1621	1621	1621	1621	1621	1621	1621	1621	1621	1621	
ELEV FTMSL	1420.6	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	
DISCH KCFS	24.9	51.7	45.0	41.2	38.1	40.3	32.1	31.8	34.2	40.9	23.5	24.0	23.4	
POWER														
AVE POWER MW		233	202	186	178	191	157	158	170	203	118	118	112	
PEAK POW MW		475	475	480	509	517	538	538	538	538	538	538	529	
ENERGY GWH	1221.2	173.2	145.2	138.6	132.5	137.5	116.5	57.0	28.6	38.9	87.6	87.6	77.9	
--FORT RANDALL--														
NAT INFLOW	425	118	122	46	31	30	4	3	1	1	10	20	39	
DEPLETION	73	9	12	18	15	7	1	1	0	1	3	3	3	
EVAPORATION	147			10	32	39	31	12	5	5	12			
REG INFLOW	21649	3287	2785	2554	2325	2384	1946	935	470	644	1443	1495	1380	
RELEASE	22411	3287	2785	2598	2614	2530	2590	1257	586	670	1342	1145	1006	
STOR CHANGE	-762		0	-44	-289	-146	-643	-321	-116	-26	101	350	374	
STORAGE	3882	3882	3882	3838	3549	3402	2759	2438	2321	2296	2396	2746	3120	
ELEV FTMSL	1359.0	1359.0	1359.0	1358.5	1355.2	1353.5	1345.0	1340.0	1338.0	1337.5	1339.2	1344.8	1349.9	
DISCH KCFS	27.7	53.5	46.8	42.2	42.5	42.5	42.1	42.2	42.2	42.2	21.8	18.6	17.5	
POWER														
AVE POWER MW		368	366	348	343	336	319	297	284	280	160	141	139	
PEAK POW MW		368	369	367	356	350	319	296	287	285	293	319	339	
ENERGY GWH	2059.3	273.7	263.2	258.8	255.5	241.9	237.5	106.9	47.8	53.7	118.7	104.9	96.7	
--GAVINS POINT--														
NAT INFLOW	1036	149	142	110	92	89	96	47	22	25	80	80	104	
DEPLETION	110	19	24	39	10	-5	2	5	2	3	10	1		
CHAN STOR	17	-50	13	9	-1	0	1	0	0	0	38	6	2	
EVAPORATION	45			3	8	11	10	4	2	2	5			
REG INFLOW	23309	3367	2916	2675	2688	2613	2675	1294	604	690	1445	1230	1112	
RELEASE	23293	3351	2916	2675	2675	2588	2675	1294	604	690	1445	1230	1150	
STOR CHANGE	16	16		13	25								-38	
STORAGE	326	342	342	342	355	380	380	380	380	380	380	380	342	
ELEV FTMSL	1205.3	1206.0	1206.0	1206.0	1206.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1206.0	
DISCH KCFS	30.3	54.5	49.0	43.5	43.5	43.5	43.5	43.5	43.5	43.5	23.5	20.0	20.0	
POWER														
AVE POWER MW		110	112	113	114	115	116	116	116	116	83	71	70	
PEAK POW MW		111	112	113	114	116	116	116	116	116	117	117	114	
ENERGY GWH	746.8	81.6	80.7	84.2	84.8	83.0	86.4	41.8	19.5	22.3	61.5	52.5	48.7	
--GAVINS POINT - SIOUX CITY--														
NAT INFLOW	3266	1096	720	480	280	200	160	64	30	34	96	32	74	
DEPLETION	230	36	31	39	36	24	11	6	3	3	13	14	14	
REGULATED FLOW AT SIOUX CITY														
KAF	26329	4411	3605	3116	2919	2764	2824	1352	631	721	1528	1248	1210	
KCFS		71.7	60.6	50.7	47.5	46.5	45.9	45.4	45.4	45.4	24.8	20.3	21.0	
--TOTAL--														
NAT INFLOW	22291	4700	6844	4081	1575	1036	1039	453	211	242	647	601	862	
DEPLETION	2246	441	1141	981	289	-161	-66	-104	-49	-55	-94	-55	-22	
CHAN STOR	-51	-253	26	18	25	62	56	0	0	-1	48	-33	2	
EVAPORATION	2327			147	461	570	485	214	99	112	240			
STORAGE	65497	65091	67216	67071	65003	62927	60780	59770	59301	58764	57785	57160	56835	
SYSTEM POWER														
AVE POWER MW		2054	1952	1875	1823	1727	1416	1385	1412	1524	1032	1090	1069	
PEAK POW MW		2373	2381	2386	2400	2390	2366	2333	2317	2305	2299	2317	2320	
ENERGY GWH	11332.2	1528.2	1405.1	1395.0	1355.9	1243.8	1053.2	498.7	237.3	292.7	767.7	810.6	744.1	
DAILY GWH		49.3	46.8	45.0	43.7	41.5	34.0	33.2	33.9	36.6	24.8	26.1	25.2	

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TIME OF STUDY 07:42:51		FULLS SERV / NAV SEAS +10 DAYS / NO MAY PULSE												STUDY NO				5
30APR11		2011												2012				
INI-SUM		31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	31JAN	29FEB					
--FORT PECK--																		
NAT INFLOW	10601	2296	3439	1742	600	400	462	231	108	123	395	374	432					
DEPLETION	263	260	513	204	-62	-129	-89	-30	-14	-16	-123	-146	-105					
EVAPORATION	339			24	74	91	77	18	8	9	38							
MOD INFLOW	9999	2036	2926	1514	588	438	474	243	113	130	480	520	537					
RELEASE	11505	1230	1547	1599	1476	1191	1107	536	250	286	738	799	748					
STOR CHANGE	-1506	806	1379	-84	-888	-752	-633	-293	-137	-156	-258	-279	-211					
STORAGE	16292	17098	18477	18393	17505	16753	16120	15827	15690	15534	15276	14997	14786					
ELEV FTMSL	2240.9	2244.3	2250.0	2249.7	2246.1	2242.9	2240.1	2238.8	2238.2	2237.5	2236.3	2235.0	2234.0					
DISCH KCFS	7.1	20.0	26.0	26.0	24.0	20.0	18.0	18.0	18.0	18.0	12.0	13.0	13.0					
POWER																		
AVE POWER MW		168	171	173	171	169	167	166	165	164	161	163	163					
PEAK POW MW		169	173	172	170	168	166	165	165	164	164	163	162					
ENERGY GWH	1222.8	124.8	122.8	128.4	127.4	121.8	124.4	59.6	27.7	31.6	119.7	121.5	113.1					
--GARRISON--																		
NAT INFLOW	13997	2231	4799	3203	1080	542	628	239	112	127	296	313	427					
DEPLETION	970	100	802	621	93	-133	37	-118	-55	-63	-117	-96	-64					
CHAN STOR	-55	-122	-57		18	37	19				59	-10						
EVAPORATION	390			28	86	105	88	20	9	11	43							
REG INFLOW	24086	3238	5487	4153	2395	1798	1666	872	407	465	1166	1199	1239					
RELEASE	27327	2982	3660	3782	3782	3224	2705	1309	611	587	1353	1722	1611					
STOR CHANGE	-3241	256	1828	372	-1387	-1426	-1039	-437	-204	-122	-187	-523	-372					
STORAGE	21349	21605	23433	23805	22418	20992	19952	19515	19312	19190	19003	18480	18108					
ELEV FTMSL	1847.3	1848.0	1853.0	1854.0	1850.3	1846.2	1843.2	1841.9	1841.3	1840.9	1840.3	1838.7	1837.5					
DISCH KCFS	14.9	48.5	61.5	61.5	61.5	54.2	44.0	44.0	44.0	37.0	22.0	28.0	28.0					
POWER																		
AVE POWER MW		501	503	505	504	501	499	491	482	454	278	351	348					
PEAK POW MW		501	504	505	502	500	498	483	481	481	478	473	468					
ENERGY GWH	3272.1	372.9	361.9	375.7	374.9	360.9	371.4	176.6	81.0	87.1	206.9	260.9	241.9					
--OAHE--																		
NAT INFLOW	1746	480	552	222	78	133	79	40	19	21		14	108					
DEPLETION	583	71	145	173	116	28	-10	1	0	1	12	18	28					
CHAN STOR	-43	-119	-47		26	37			0	26	57	-24						
EVAPORATION	391			27	84	105	90	21	10	11	43							
REG INFLOW	28055	3272	4020	3804	3659	3250	2741	1327	619	623	1355	1694	1691					
RELEASE	31213	3532	3703	3838	3651	3794	3427	1642	801	1022	2533	1710	1560					
STOR CHANGE	-3158	-260	317	-34	9	-544	-686	-315	-181	-399	-1178	-16	130					
STORAGE	21990	21730	22047	22012	22021	21477	20791	20476	20294	19896	18718	18702	18832					
ELEV FTMSL	1616.9	1616.1	1617.0	1616.9	1617.0	1615.4	1613.5	1612.5	1612.0	1610.8	1607.1	1607.1	1607.5					
DISCH KCFS	26.0	57.4	62.2	62.4	59.4	63.8	55.7	55.2	57.7	64.4	41.2	27.8	27.1					
POWER																		
AVE POWER MW		747	754	756	757	752	719	706	728	727	532	358	349					
PEAK POW MW		753	756	756	757	748	739	734	731	724	706	706	708					
ENERGY GWH	4721.2	555.7	542.9	562.5	562.9	541.2	534.6	254.2	122.3	139.6	396.2	266.0	243.0					
--BIG BEND--																		
EVAPORATION	71			5	15	19	16	4	2	2	9							
REG INFLOW	31143	3532	3703	3834	3636	3776	3411	1638	799	1020	2524	1710	1560					
RELEASE	31180	3569	3703	3834	3636	3776	3411	1638	799	1020	2524	1710	1560					
STORAGE	1658	1621	1621	1621	1621	1621	1621	1621	1621	1621	1621	1621	1621					
ELEV FTMSL	1420.6	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0					
DISCH KCFS	24.9	58.0	62.2	62.3	59.1	63.5	55.5	55.1	57.6	64.3	41.0	27.8	27.1					
POWER																		
AVE POWER MW		249	266	275	276	299	268	270	282	314	203	136	130					
PEAK POW MW		440	440	464	509	518	538	538	538	538	538	538	529					
ENERGY GWH	1749.3	185.4	191.2	204.9	205.5	215.6	199.1	97.3	47.4	60.3	151.1	101.2	90.4					
--FORT RANDALL--																		
NAT INFLOW	635	176	182	68	47	46	6	4	2	2	14	30	59					
DEPLETION	73	9	12	18	15	7	1	1	0	1	3	3	3					
EVAPORATION	82			6	19	24	18	4	2	2	7							
REG INFLOW	31662	3736	3873	3877	3649	3791	3398	1637	799	1019	2530	1737	1616					
RELEASE	32426	3465	3873	4060	4071	3940	4044	1959	914	1045	2427	1387	1242					
STOR CHANGE	-764	271	-182	-423	-149	-646	-322	-115	-26	-104	350	374						
STORAGE	3882	4153	4153	3971	3548	3399	2753	2431	2316	2290	2394	2744	3118					
ELEV FTMSL	1359.0	1362.0	1362.0	1360.0	1355.2	1353.4	1344.9	1339.8	1337.8	1337.4	1339.2	1344.7	1349.9					
DISCH KCFS	27.7	56.4	65.1	66.0	66.2	66.2	65.8	65.8	65.8	65.8	39.5	22.6	21.6					
POWER																		
AVE POWER MW		372	375	372	361	350	333	303	287	281	273	170	171					
PEAK POW MW		375	375	369	353	347	314	291	282	280	293	319	339					
ENERGY GWH	2252.7	277.0	270.0	277.1	268.6	252.1	247.8	109.1	48.2	54.0	203.2	126.7	119.0					
--GAVINS POINT--																		
NAT INFLOW	1554	223	214	164	138	133	144	71	33	38	120	120	156					
DEPLETION	110	19	24	39	10	-5	2	5	2	3	10	1						
CHAN STOR	8	-56	-17	-2	0	0	1	0	0	0	49	31	2					
EVAPORATION	24			2	5	6	6	1	1	1	3							
REG INFLOW	33854	3613	4046	4181	4194	4071	4181	2023	944	1079	2583	1537	1400					
RELEASE	33838	3597	4046	4181	4181	4046	4181	2023	944	1079	2583	1537	1438					
STOR CHANGE	16	16		13	25								-38					
STORAGE	326	342	342	342	355	380	380	380	380	380	380	380	342					
ELEV FTMSL	1205.3	1206.0	1206.0	1206.0	1206.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1207.5	1206.0					
DISCH KCFS	30.3	58.5	68.0	68.0	68.0	68.0	68.0	68.0	68.0	68.0	42.0	25.0	25.0					
POWER																		
AVE POWER MW		109	108	108	109	112	113	113	113	113	116	88	87					
PEAK POW MW		110	108	108	110	113	113	113	113	113	116	117	114					
ENERGY GWH	778.1	80.9	77.6	80.2	80.9	80.4	84.3	40.8	19.0	21.8	86.5	65.3	60.4					
--GAVINS POINT - SIOUX CITY--																		
NAT INFLOW	4898	1644	1080	720	420	300	240	96	45	51	144	48	110					
DEPLETION	230	36	31	39	36	24	11	6	3	3	13	14	14					
REGULATED FLOW	AT SIOUX CITY																	
KAF	38506	5205	5095	4862	4565	4322	4410	2113	986	1127	2714	1571	1534					
KCFS	84.7	85.6	79.1	74.2	72.6	71.7	71.0	71.0	71.0	71.0	44.1	25.6	26.7					
--TOTAL--																		
NAT INFLOW	33431	7050	10266	6119	2363	1554	1559	680	317	363	969	899	1292					
DEPLETION	2229	495	1527	1094	208	-208	-85	-135	-63	-72	-202	-206	-124					
CHAN STOR	-89	-298	-120	-2	18	63	57	0	0	26	167	-2	2					
EVAPORATION	1297			90	283	349	295	68	31	35	144							
STORAGE	65497	66549	70073	70143	67468	64622	61617	60250	59613	58911	57392	56924	56807					
SYSTEM POWER																		
AVE POWER MW		2146	2176	2189	2178	2183	2099	2049	2058	2053	1564	1266	1247					
PEAK POW MW		2348	2356	2374	2401	2394	2369	2325	2311	2300	2296	2314	2320					
ENERGY GWH	13996.1	1596.7	1566.4	1628.7	1620.2	1571.9	1561.6	737.6	345.7	394.2	1163.5	941.6	867.9					
DAILY GWH		51.5	52.2	52.5	52.3	52.4	50.4	49.2	49.4	49.3	37.5	30.4	29.9					
INI-SUM		31MAY	30JUN	31JUL	31AUG	30SEP	31OCT	15NOV	22NOV	30NOV	31DEC	31JAN	29FEB					

May 3rd, 2011 Reservoir Monthly Study Call

General Conditions:

1. Past Runoff

Last month's runoff was 267% of normal.

Ranging from about 578% in the Sioux City reach to 74% in the Gavins reach. Due to continued plains snow melt runoff and wet soil conditions.

Total system storage on April 30 – 65.5 MAF

2. Current Mountain Snow Pack (May thru July runoff)

141% of normal – above Ft. Peck

136% of normal – between Ft. Peck and Garrison

138% of normal – total above Garrison

Normally, peak accumulation occurs near April 15th. However, both reaches are currently gaining snowpack

3. Forecasted Annual Runoff

See forecast discussion included with the email.

Basic – 44.0 MAF (178% of Normal)

UB – 49.2 MAF

LB – 38.8 MAF

4. Gavins Releases

April – 30.3 kcfs.

Currently 45.0 kcfs. Will continue to release 45.0 kcfs through early May when flows will be increased to 57,500 cfs over several days due to the service level increase and continued evacuation of stored flood water.

Monthly Studies

1. Next Water-Year Balancing – Will be 100% full and balanced at Feb 2012 – All 3 conditions.

2. Navigation Service Levels

Flood control releases all year (including spillway releases) – all 3 conditions

3. Navigation Season Lengths

10 Day extension for all 3 conditions.

4. Spring Pulse

May – Cancelled due to service level increase.

5. Energy Generation

Last month – 779 MkWhrs actual – long-term average for March 711 MkWhrs

This year forecast – Basic Simulation – 14.1 BKWhrs. Long-term average approx 10.0 BKWhrs

6. Spring Forage Fish Spawn

Will “favor” Garrison this year contingent upon flood control operations.

NWO

From: Farhat, Jody S NWD02
Sent: Wednesday, May 04, 2011 9:13 AM
To: [REDACTED] NWD02
Subject: Re: Todd Sando call (UNCLASSIFIED)

Thanks, I was hoping he talked to you.

----- Original Message -----

From: [REDACTED] NWD02
To: Farhat, Jody S NWD02
Sent: Wed May 04 07:03:30 2011
Subject: RE: Todd Sando call (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

I talked to him a few minutes ago. I gave him tentative schedule for Garrison increases. We discussed the runoff and monthly studies. He was concerned about the upper basic forecast and encouraged us to go up to 60 kcfs quicker if necessary. We discussed the stages expected in Bismarck, etc. I can fill you in more later.

The schedule I worked out with Garrison this morning was: 29 kcfs tomorrow (full output of 4 units). Then 3 kcfs increase using 8 am tunnel release changes starting Friday. (32 Fri, 35 Sat, 38 Sun, 41 Mon, 44 Tues). Not sure how we'll make the last changes (may want to ease into the last few) but maybe something like 46 Wed, 48 Thurs, and 49 Fri.
Mike

-----Original Message-----

From: Farhat, Jody S NWD02
Sent: Wednesday, May 04, 2011 8:55 AM
To: [REDACTED] NWD02
Subject: Todd Sando call (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

I need to give Todd a call back. Have you talked to him recently, and what is the schedule to increase Garrison releases up to the 49 kcfs?

Jody Farhat, P.E.
Chief, Missouri River Basin Water Management

jody.s.farhat@usace.army.mil
Office: 402-996-3840
Cell: 402-350-1417
Home: [REDACTED]

Classification: UNCLASSIFIED
Caveats: NONE

NWO

From: Farhat, Jody S NWD02
Sent: Wednesday, May 04, 2011 1:21 PM
To: NWD02; NWD02
Subject: FW: Missouri River Forecast (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

We need to provide NWS with our come-up schedule when we start showing it in FUI.

Jody

-----Original Message-----

From: ldm@ls1-krf.krf.noaa.gov [mailto:ldm@ls1-krf.krf.noaa.gov]
Sent: Wednesday, May 04, 2011 9:30 AM
To: Farhat, Jody S NWD02
Subject: Missouri River Forecast

ZCZC MKCRVFMOM DEF
TTAA00 KKRF DDHHMM
RVFMOM

RIVER FORECAST

NWS MISSOURI BASIN RIVER FORECAST CENTER PLEASANT HILL MO 1420Z WED MAY 04 2011

:
: THIS PRODUCT HAS PRELIMINARY DATA THAT MAY BE SUBJECT TO REVISION.
: REFER TO YOUR LOCAL WFO FOR THE LATEST OFFICIAL RIVER FORECAST.

: FORECAST GROUP IS MOMAIN LONG RANGE

: ==> This forecast includes obsd precip & 24 hours of QPF <==

RIVER/STATION	FS	TDY	F O R E C A S T
MISSOURI RIVER			
NEBRASKA CITY NE	18.0	19.3	FALL BELOW FS 05/11
BROWNVILLE NE	33.0	35.0	FALL BELOW FS 05/11
RULO NE	17.0	18.2	FALL BELOW FS 05/11
ST JOSEPH MO	17.0	17.5	FALL BELOW FS 05/07 AM
ATCHISON KS NO.1	22.0	20.5E	CONTINUE TO FALL
NAPOLEON MO	17.0	15.5	CONTINUE TO FALL
WAVERLY MO	20.0	18.4	LITTLE CHANGE NEXT 24 HOURS
MIAMI MO	18.0	16.4E	LITTLE CHANGE NEXT 24 HOURS

:
:
:
:GAVINS PT RES NE - MISSOURI RIVER

:
:
:LATEST ESTIMATED DISCHARGE 45.00 KCFS AT 1200Z ON 0504
:ER GPDN1REL 20110504 Z DC201105041420/DH18/QTIFF/DIH6
:QPF FCST 12Z 18Z 0Z 6Z
:E1 :0504: / 45.00/ 45.00/ 45.00
:E2 :0505:/ 45.00/ 45.00/ 45.00/ 45.00

.E3 :0506:/	45.00/	45.00/	45.00/	45.00
.E4 :0507:/	45.00/	45.00/	45.00/	45.00
.E5 :0508:/	45.00/	45.00/	45.00/	45.00
.E6 :0509:/	45.00/	45.00/	45.00/	45.00
.E7 :0510:/	45.00/	45.00/	45.00/	45.00
.E8 :0511:/	45.00/	45.00/	45.00/	45.00
.E9 :0512:/	45.00/	45.00/	45.00/	45.00
.E10 :0513:/	45.00/	45.00/	45.00/	45.00
.E11 :0514:/	45.00/	45.00/	45.00/	45.00
.E12 :0515:/	45.00/	45.00/	45.00/	45.00
.E13 :0516:/	45.00/	45.00/	45.00/	45.00
.E14 :0517:/	45.00/	45.00/	45.00/	45.00
.E15 :0518:/	45.00/	45.00/	45.00/	45.00
.E16 :0519:/	45.00/	45.00/	45.00/	45.00
.E17 :0520:/	45.00/	45.00/	45.00/	45.00
.E18 :0521:/	45.00/	45.00/	45.00/	45.00
.E19 :0522:/	45.00/	45.00/	45.00/	45.00
.E20 :0523:/	45.00/	45.00/	45.00/	45.00
.E21 :0524:/	45.00/	45.00/	45.00/	45.00
.E22 :0525:/	45.00/	45.00/	45.00/	45.00
.E23 :0526:/	45.00/	45.00/	45.00/	45.00
.E24 :0527:/	45.00/	45.00/	45.00/	45.00
.E25 :0528:/	45.00/	45.00/	45.00/	45.00
.E26 :0529:/	45.00/	45.00/	45.00/	45.00
.E27 :0530:/	45.00			

:
:BAGNELL RES MO - OSAGE RIVER

:
:LATEST ESTIMATED DISCHARGE 3.32 KCFS AT 1200Z ON 0504
:ER LKSM7REL 20110504 Z DC201105041420/DH18/QTIFF/DIH6

:QPF FCST	12Z	18Z	0Z	6Z
.E1 :0504:	/	3.00/	3.00/	3.00
.E2 :0505:/	2.30/	2.30/	2.30/	2.30
.E3 :0506:/	2.00/	2.00/	2.00/	2.00
.E4 :0507:/	18.00/	18.00/	18.00/	18.00
.E5 :0508:/	18.00/	18.00/	18.00/	18.00
.E6 :0509:/	18.00/	18.00/	18.00/	18.00
.E7 :0510:/	18.00/	18.00/	18.00/	18.00
.E8 :0511:/	18.00/	18.00/	18.00/	18.00
.E9 :0512:/	18.00/	18.00/	18.00/	18.00
.E10 :0513:/	18.00/	18.00/	18.00/	18.00
.E11 :0514:/	18.00/	18.00/	18.00/	18.00
.E12 :0515:/	18.00/	18.00/	18.00/	18.00
.E13 :0516:/	18.00/	18.00/	18.00/	18.00
.E14 :0517:/	18.00/	18.00/	18.00/	18.00
.E15 :0518:/	18.00/	18.00/	18.00/	18.00
.E16 :0519:/	18.00/	18.00/	18.00/	18.00
.E17 :0520:/	18.00/	18.00/	18.00/	18.00
.E18 :0521:/	18.00/	18.00/	18.00/	18.00
.E19 :0522:/	18.00/	18.00/	18.00/	18.00
.E20 :0523:/	18.00/	18.00/	18.00/	18.00
.E21 :0524:/	18.00/	18.00/	18.00/	18.00
.E22 :0525:/	18.00/	18.00/	18.00/	18.00
.E23 :0526:/	18.00/	18.00/	18.00/	18.00
.E24 :0527:/	18.00/	18.00/	18.00/	18.00
.E25 :0528:/	18.00/	18.00/	18.00/	18.00

.E26 :0529:/ 18.00/ 18.00/ 18.00/ 18.00

.E27 :0530:/ 18.00

:

:SOUTH SIOUX CITY NE - MISSOURI RIVER HSA - FSD

:FLOOD STAGE 30.0 FCST ISSUANCE STAGE 28.0

:

:LATEST STAGE 23.9 FT AT 1400Z ON 0504

.ER SSCN1 20110504 Z DC201105041420/DH18/HGIFF/DIH6

:QPF FCST 12Z 18Z 0Z 6Z

.E1 :0504:/ / 23.9/ 23.9/ 23.8

.E2 :0505:/ 23.8/ 23.7/ 23.7/ 23.6

.E3 :0506:/ 23.6/ 23.5/ 23.5/ 23.4

.E4 :0507:/ 23.4/ 23.4/ 23.3/ 23.3

.E5 :0508:/ 23.3/ 23.2/ 23.2/ 23.2

.E6 :0509:/ 23.1/ 23.1/ 23.1/ 23.0

.E7 :0510:/ 23.0/ 23.0/ 22.9/ 22.9

.E8 :0511:/ 22.9/ 22.9/ 22.8/ 22.8

.E9 :0512:/ 22.8/ 22.7/ 22.7/ 22.7

.E10 :0513:/ 22.7/ 22.6/ 22.6/ 22.6

.E11 :0514:/ 22.6/ 22.5/ 22.5/ 22.5

.E12 :0515:/ 22.4/ 22.4/ 22.4/ 22.4

.E13 :0516:/ 22.4/ 22.3/ 22.3/ 22.3

.E14 :0517:/ 22.3/ 22.2/ 22.2/ 22.2

.E15 :0518:/ 22.2/ 22.1/ 22.1/ 22.1

.E16 :0519:/ 22.1/ 22.0/ 22.0/ 22.0

.E17 :0520:/ 21.9/ 21.9/ 21.9/ 21.8

.E18 :0521:/ 21.8/ 21.7/ 21.7/ 21.7

.E19 :0522:/ 21.6/ 21.6/ 21.6/ 21.5

.E20 :0523:/ 21.5/ 21.4/ 21.4/ 21.4

.E21 :0524:/ 21.3/ 21.3/ 21.3/ 21.2

.E22 :0525:/ 21.2/ 21.2/ 21.1/ 21.1

.E23 :0526:/ 21.1/ 21.0/ 21.0/ 21.0

.E24 :0527:/ 20.9/ 20.9/ 20.9/ 20.8

.E25 :0528:/ 20.8/ 20.8/ 20.8/ 20.7

.E26 :0529:/ 20.7/ 20.7/ 20.7/ 20.6

.E27 :0530:/ 20.6

.ER SSCN1 20110504 Z DC201105041420/DH18/QRIFF/DIH6

:QPF FCST 12Z 18Z 0Z 6Z

.E1 :0504:/ / 74.11/ 73.85/ 73.59

.E2 :0505:/ 73.34/ 73.07/ 72.77/ 72.43

.E3 :0506:/ 72.09/ 71.76/ 71.45/ 71.19

.E4 :0507:/ 70.96/ 70.74/ 70.54/ 70.33

.E5 :0508:/ 70.13/ 69.92/ 69.72/ 69.52

.E6 :0509:/ 69.32/ 69.13/ 68.95/ 68.78

.E7 :0510:/ 68.61/ 68.45/ 68.29/ 68.14

.E8 :0511:/ 67.99/ 67.83/ 67.68/ 67.54

.E9 :0512:/ 67.39/ 67.24/ 67.10/ 66.95

.E10 :0513:/ 66.79/ 66.64/ 66.48/ 66.33

.E11 :0514:/ 66.18/ 66.03/ 65.89/ 65.75

.E12 :0515:/ 65.62/ 65.50/ 65.37/ 65.25

.E13 :0516:/ 65.12/ 65.00/ 64.87/ 64.74

.E14 :0517:/ 64.61/ 64.49/ 64.36/ 64.22

.E15 :0518:/ 64.08/ 63.94/ 63.79/ 63.64

.E16 :0519:/ 63.49/ 63.33/ 63.17/ 63.00

.E17 :0520:/ 62.83/ 62.66/ 62.48/ 62.30

.E18 :0521:/ 62.11/ 61.92/ 61.73/ 61.54

.E19 :0522:/ 61.34/ 61.15/ 60.95/ 60.76

.E20 :0523:/	60.57/	60.38/	60.19/	60.01
.E21 :0524:/	59.83/	59.65/	59.47/	59.30
.E22 :0525:/	59.13/	58.97/	58.80/	58.65
.E23 :0526:/	58.49/	58.34/	58.19/	58.05
.E24 :0527:/	57.90/	57.77/	57.63/	57.50
.E25 :0528:/	57.38/	57.25/	57.13/	57.02
.E26 :0529:/	56.90/	56.79/	56.69/	56.58
.E27 :0530:/	56.48			

:

:OMAHA NE - MISSOURI RIVER HSA - OAX

:FLOOD STAGE 29.0 FCST ISSUANCE STAGE 27.0

:

:LATEST STAGE 25.0 FT AT 1400Z ON 0504

.ER OMHN1 20110504 Z DC201105041420/DH18/HGIFF/DIH6

:QPF FCST	12Z	18Z	0Z	6Z
.E1 :0504:/	/	24.9/	24.8/	24.8
.E2 :0505:/	24.7/	24.7/	24.6/	24.6
.E3 :0506:/	24.5/	24.5/	24.4/	24.4
.E4 :0507:/	24.3/	24.2/	24.2/	24.1
.E5 :0508:/	24.1/	24.0/	24.0/	24.0
.E6 :0509:/	23.9/	23.9/	23.8/	23.8
.E7 :0510:/	23.8/	23.7/	23.7/	23.6
.E8 :0511:/	23.6/	23.6/	23.5/	23.5
.E9 :0512:/	23.5/	23.4/	23.4/	23.4
.E10 :0513:/	23.3/	23.3/	23.3/	23.3
.E11 :0514:/	23.2/	23.2/	23.2/	23.1
.E12 :0515:/	23.1/	23.1/	23.0/	23.0
.E13 :0516:/	23.0/	23.0/	22.9/	22.9
.E14 :0517:/	22.9/	22.8/	22.8/	22.8
.E15 :0518:/	22.8/	22.7/	22.7/	22.7
.E16 :0519:/	22.6/	22.6/	22.6/	22.6
.E17 :0520:/	22.5/	22.5/	22.5/	22.4
.E18 :0521:/	22.4/	22.4/	22.3/	22.3
.E19 :0522:/	22.2/	22.2/	22.2/	22.1
.E20 :0523:/	22.1/	22.1/	22.0/	22.0
.E21 :0524:/	21.9/	21.9/	21.9/	21.8
.E22 :0525:/	21.8/	21.7/	21.7/	21.7
.E23 :0526:/	21.6/	21.6/	21.6/	21.5
.E24 :0527:/	21.5/	21.5/	21.4/	21.4
.E25 :0528:/	21.4/	21.3/	21.3/	21.3
.E26 :0529:/	21.2/	21.2/	21.2/	21.2
.E27 :0530:/	21.1			

.ER OMHN1 20110504 Z DC201105041420/DH18/QRIF/DIH6

:QPF FCST	12Z	18Z	0Z	6Z
.E1 :0504:/	/	81.66/	81.21/	80.95
.E2 :0505:/	80.72/	80.44/	80.18/	79.88
.E3 :0506:/	79.57/	79.25/	78.91/	78.56
.E4 :0507:/	78.18/	77.80/	77.42/	77.08
.E5 :0508:/	76.77/	76.50/	76.26/	76.04
.E6 :0509:/	75.84/	75.59/	75.34/	75.09
.E7 :0510:/	74.85/	74.60/	74.37/	74.15
.E8 :0511:/	73.94/	73.74/	73.55/	73.36
.E9 :0512:/	73.18/	73.00/	72.82/	72.65
.E10 :0513:/	72.47/	72.31/	72.14/	71.97
.E11 :0514:/	71.80/	71.63/	71.45/	71.28
.E12 :0515:/	71.10/	70.92/	70.73/	70.56
.E13 :0516:/	70.39/	70.22/	70.07/	69.91

.E14 :0517:/	69.76/	69.60/	69.45/	69.30
.E15 :0518:/	69.14/	68.99/	68.83/	68.68
.E16 :0519:/	68.52/	68.36/	68.20/	68.03
.E17 :0520:/	67.85/	67.68/	67.50/	67.32
.E18 :0521:/	67.13/	66.94/	66.75/	66.55
.E19 :0522:/	66.35/	66.14/	65.93/	65.72
.E20 :0523:/	65.51/	65.30/	65.08/	64.86
.E21 :0524:/	64.65/	64.44/	64.22/	64.02
.E22 :0525:/	63.81/	63.61/	63.41/	63.22
.E23 :0526:/	63.02/	62.83/	62.65/	62.47
.E24 :0527:/	62.29/	62.11/	61.94/	61.77
.E25 :0528:/	61.61/	61.45/	61.29/	61.14
.E26 :0529:/	61.00/	60.86/	60.72/	60.58
.E27 :0530:/	60.45			

:
:NEBRASKA CITY NE - MISSOURI RIVER HSA - OAX
:FLOOD STAGE 18.0 FCST ISSUANCE STAGE 16.0

:
:LATEST STAGE 19.3 FT AT 1400Z ON 0504
: FALL BELOW FLOOD STAGE ON 05/11/2011 AROUND 4Z
.ER NEBN1 20110504 Z DC201105041420/DH18/HGIF/DIH6

:QPF FCST	12Z	18Z	0Z	6Z
.E1 :0504:/	/	19.3/	19.3/	19.3
.E2 :0505:/	19.2/	19.1/	19.1/	19.1
.E3 :0506:/	19.0/	18.9/	18.8/	18.7
.E4 :0507:/	18.7/	18.6/	18.5/	18.4
.E5 :0508:/	18.4/	18.4/	18.3/	18.2
.E6 :0509:/	18.3/	18.2/	18.2/	18.2
.E7 :0510:/	18.1/	18.1/	18.0/	18.0
.E8 :0511:/	18.0/	17.9/	17.8/	17.8
.E9 :0512:/	17.8/	17.8/	17.7/	17.6
.E10 :0513:/	17.6/	17.6/	17.5/	17.4
.E11 :0514:/	17.4/	17.4/	17.3/	17.2
.E12 :0515:/	17.2/	17.2/	17.1/	17.1
.E13 :0516:/	17.0/	17.0/	17.0/	16.9
.E14 :0517:/	16.8/	16.8/	16.8/	16.7
.E15 :0518:/	16.7/	16.7/	16.6/	16.6
.E16 :0519:/	16.5/	16.5/	16.5/	16.4
.E17 :0520:/	16.4/	16.4/	16.4/	16.3
.E18 :0521:/	16.3/	16.3/	16.2/	16.2
.E19 :0522:/	16.1/	16.1/	16.1/	16.0
.E20 :0523:/	16.0/	16.0/	15.9/	15.8
.E21 :0524:/	15.8/	15.8/	15.7/	15.7
.E22 :0525:/	15.6/	15.6/	15.6/	15.5
.E23 :0526:/	15.5/	15.5/	15.4/	15.3
.E24 :0527:/	15.3/	15.3/	15.2/	15.2
.E25 :0528:/	15.1/	15.1/	15.1/	15.0
.E26 :0529:/	15.0/	15.0/	14.9/	14.9
.E27 :0530:/	14.8			

:QPF FCST	12Z	18Z	0Z	6Z
.E1 :0504:/	/	93.30/	93.13/	92.97
.E2 :0505:/	92.47/	91.69/	91.23/	91.15
.E3 :0506:/	90.94/	90.24/	89.35/	88.79
.E4 :0507:/	88.48/	87.93/	87.17/	86.66
.E5 :0508:/	86.44/	86.09/	85.58/	85.35
.E6 :0509:/	85.37/	85.22/	84.89/	84.70

.E7 :0510:/	84.63/	84.31/	83.82/	83.53
.E8 :0511:/	83.41/	83.10/	82.62/	82.36
.E9 :0512:/	82.27/	81.99/	81.53/	81.25
.E10 :0513:/	81.15/	80.86/	80.39/	80.08
.E11 :0514:/	79.96/	79.72/	79.34/	78.94
.E12 :0515:/	78.75/	78.65/	78.32/	77.85
.E13 :0516:/	77.61/	77.52/	77.23/	76.80
.E14 :0517:/	76.59/	76.54/	76.28/	75.89
.E15 :0518:/	75.70/	75.67/	75.44/	75.06
.E16 :0519:/	74.89/	74.88/	74.67/	74.31
.E17 :0520:/	74.15/	74.14/	73.92/	73.55
.E18 :0521:/	73.36/	73.33/	73.10/	72.72
.E19 :0522:/	72.53/	72.49/	72.25/	71.87
.E20 :0523:/	71.67/	71.61/	71.36/	70.97
.E21 :0524:/	70.75/	70.68/	70.43/	70.02
.E22 :0525:/	69.80/	69.73/	69.49/	69.10
.E23 :0526:/	68.88/	68.82/	68.59/	68.22
.E24 :0527:/	68.02/	67.97/	67.75/	67.39
.E25 :0528:/	67.20/	67.16/	66.96/	66.62
.E26 :0529:/	66.44/	66.42/	66.24/	65.92
.E27 :0530:/	65.76			

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:BROWNVILLE NE - MISSOURI RIVER HSA - OAX

:FLOOD STAGE 33.0 FCST ISSUANCE STAGE 31.0

:

:LATEST STAGE 35.0 FT AT 1400Z ON 0504

: FALL BELOW FLOOD STAGE ON 05/11/2011 AROUND 0Z

.ER BRON1 20110504 Z DC201105041420/DH18/HGIF/ DIH6

:QPF FCST	12Z	18Z	0Z	6Z
.E1 :0504:	/	34.9/	34.8/	34.8
.E2 :0505:/	34.7/	34.6/	34.5/	34.4
.E3 :0506:/	34.4/	34.3/	34.2/	34.0
.E4 :0507:/	34.0/	33.9/	33.7/	33.6
.E5 :0508:/	33.5/	33.5/	33.4/	33.3
.E6 :0509:/	33.3/	33.2/	33.2/	33.1
.E7 :0510:/	33.1/	33.1/	33.0/	32.9
.E8 :0511:/	32.9/	32.9/	32.8/	32.7
.E9 :0512:/	32.7/	32.7/	32.6/	32.5
.E10 :0513:/	32.5/	32.5/	32.4/	32.3
.E11 :0514:/	32.3/	32.3/	32.2/	32.2
.E12 :0515:/	32.1/	32.1/	32.0/	32.0
.E13 :0516:/	31.9/	31.8/	31.8/	31.8
.E14 :0517:/	31.7/	31.6/	31.6/	31.6
.E15 :0518:/	31.5/	31.4/	31.4/	31.4
.E16 :0519:/	31.3/	31.3/	31.3/	31.2
.E17 :0520:/	31.2/	31.1/	31.1/	31.1
.E18 :0521:/	31.0/	31.0/	30.9/	30.9
.E19 :0522:/	30.8/	30.8/	30.8/	30.7
.E20 :0523:/	30.7/	30.6/	30.6/	30.5
.E21 :0524:/	30.5/	30.4/	30.4/	30.3
.E22 :0525:/	30.3/	30.2/	30.2/	30.2
.E23 :0526:/	30.1/	30.0/	30.0/	30.0
.E24 :0527:/	29.9/	29.8/	29.8/	29.8
.E25 :0528:/	29.7/	29.7/	29.6/	29.6
.E26 :0529:/	29.5/	29.5/	29.5/	29.4
.E27 :0530:/	29.4			

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:RULO NE - MISSOURI RIVER HSA - OAX
 :FLOOD STAGE 17.0 FCST ISSUANCE STAGE 15.0

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:LATEST STAGE 18.2 FT AT 1330Z ON 0504

: FALL BELOW FLOOD STAGE ON 05/11/2011 AROUND 10Z

.ER RULN1 20110504 Z DC201105041420/DH18/HGIF/DIH6

:QPF FCST	12Z	18Z	0Z	6Z
.E1 :0504:	/	18.2/	18.2/	18.1
.E2 :0505:/	18.1/	18.0/	18.0/	17.9
.E3 :0506:/	17.9/	17.8/	17.8/	17.7
.E4 :0507:/	17.6/	17.6/	17.5/	17.5
.E5 :0508:/	17.4/	17.3/	17.3/	17.3
.E6 :0509:/	17.2/	17.2/	17.2/	17.1
.E7 :0510:/	17.1/	17.1/	17.1/	17.0
.E8 :0511:/	17.0/	16.9/	16.9/	16.9
.E9 :0512:/	16.8/	16.8/	16.8/	16.7
.E10 :0513:/	16.7/	16.6/	16.6/	16.6
.E11 :0514:/	16.5/	16.5/	16.4/	16.4
.E12 :0515:/	16.4/	16.3/	16.3/	16.3
.E13 :0516:/	16.2/	16.2/	16.1/	16.1
.E14 :0517:/	16.1/	16.0/	16.0/	16.0
.E15 :0518:/	15.9/	15.9/	15.8/	15.8
.E16 :0519:/	15.8/	15.7/	15.7/	15.7
.E17 :0520:/	15.7/	15.6/	15.6/	15.6
.E18 :0521:/	15.6/	15.5/	15.5/	15.5
.E19 :0522:/	15.4/	15.4/	15.3/	15.3
.E20 :0523:/	15.3/	15.2/	15.2/	15.2
.E21 :0524:/	15.2/	15.1/	15.1/	15.0
.E22 :0525:/	15.0/	15.0/	14.9/	14.9
.E23 :0526:/	14.9/	14.8/	14.8/	14.8
.E24 :0527:/	14.7/	14.7/	14.6/	14.6
.E25 :0528:/	14.6/	14.5/	14.5/	14.5
.E26 :0529:/	14.5/	14.4/	14.4/	14.4
.E27 :0530:/	14.4			

.ER RULN1 20110504 Z DC201105041420/DH18/QRIF/DIH6

:QPF FCST	12Z	18Z	0Z	6Z
.E1 :0504:	/	97.54/	97.08/	96.65
.E2 :0505:/	96.37/	96.10/	95.56/	94.87
.E3 :0506:/	94.39/	94.18/	93.89/	93.25
.E4 :0507:/	92.44/	91.85/	91.44/	90.91
.E5 :0508:/	90.25/	89.74/	89.44/	89.10
.E6 :0509:/	88.69/	88.42/	88.34/	88.17
.E7 :0510:/	87.90/	87.68/	87.52/	87.21
.E8 :0511:/	86.78/	86.46/	86.25/	85.93
.E9 :0512:/	85.52/	85.22/	85.05/	84.76
.E10 :0513:/	84.36/	84.07/	83.91/	83.66
.E11 :0514:/	83.25/	82.90/	82.69/	82.46
.E12 :0515:/	82.12/	81.73/	81.46/	81.30
.E13 :0516:/	81.02/	80.61/	80.30/	80.12
.E14 :0517:/	79.87/	79.50/	79.22/	79.08
.E15 :0518:/	78.87/	78.53/	78.28/	78.16
.E16 :0519:/	77.97/	77.65/	77.42/	77.32
.E17 :0520:/	77.16/	76.85/	76.63/	76.54
.E18 :0521:/	76.37/	76.06/	75.81/	75.70
.E19 :0522:/	75.52/	75.20/	74.95/	74.83
.E20 :0523:/	74.63/	74.31/	74.05/	73.92
.E21 :0524:/	73.71/	73.38/	73.11/	72.96

.E22 :0525:/	72.75/	72.40/	72.13/	71.98
.E23 :0526:/	71.77/	71.44/	71.18/	71.04
.E24 :0527:/	70.84/	70.53/	70.28/	70.15
.E25 :0528:/	69.97/	69.67/	69.43/	69.31
.E26 :0529:/	69.15/	68.86/	68.64/	68.54
.E27 :0530:/	68.40			

:

:ST JOSEPH MO - MISSOURI RIVER HSA - EAX

:FLOOD STAGE 17.0 FCST ISSUANCE STAGE 13.5

:

:LATEST STAGE 17.5 FT AT 1330Z ON 0504

: FALL BELOW FLOOD STAGE ON 05/07/2011 AROUND 3Z

.ER SJSM7 20110504 Z DC201105041420/DH18/HGIF/ DIH6

:QPF FCST	12Z	18Z	0Z	6Z
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.E1 :0504:/	/	17.6/	17.5/	17.4
.E2 :0505:/	17.4/	17.3/	17.3/	17.2
.E3 :0506:/	17.1/	17.1/	17.0/	17.0
.E4 :0507:/	16.9/	16.8/	16.7/	16.6
.E5 :0508:/	16.6/	16.5/	16.4/	16.4
.E6 :0509:/	16.3/	16.3/	16.2/	16.2
.E7 :0510:/	16.2/	16.1/	16.1/	16.1
.E8 :0511:/	16.0/	16.0/	15.9/	15.9
.E9 :0512:/	15.8/	15.8/	15.7/	15.7
.E10 :0513:/	15.6/	15.6/	15.5/	15.5
.E11 :0514:/	15.5/	15.4/	15.3/	15.3
.E12 :0515:/	15.3/	15.2/	15.2/	15.1
.E13 :0516:/	15.1/	15.0/	15.0/	14.9
.E14 :0517:/	14.9/	14.9/	14.8/	14.8
.E15 :0518:/	14.7/	14.7/	14.7/	14.6
.E16 :0519:/	14.6/	14.6/	14.5/	14.5
.E17 :0520:/	14.5/	14.4/	14.4/	14.4
.E18 :0521:/	14.3/	14.3/	14.3/	14.2
.E19 :0522:/	14.2/	14.2/	14.1/	14.1
.E20 :0523:/	14.1/	14.0/	14.0/	14.0
.E21 :0524:/	13.9/	13.9/	13.9/	13.8
.E22 :0525:/	13.8/	13.7/	13.7/	13.7
.E23 :0526:/	13.6/	13.6/	13.5/	13.5
.E24 :0527:/	13.5/	13.4/	13.4/	13.4
.E25 :0528:/	13.3/	13.3/	13.3/	13.2
.E26 :0529:/	13.2/	13.2/	13.1/	13.1
.E27 :0530:/	13.1			

.ER SJSM7 20110504 Z DC201105041420/DH18/QRIF/ DIH6

:QPF FCST	12Z	18Z	0Z	6Z
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.E1 :0504:/	/	99.48/	98.97/	98.50
.E2 :0505:/	98.04/	97.66/	97.37/	96.99
.E3 :0506:/	96.38/	95.76/	95.38/	95.14
.E4 :0507:/	94.71/	93.99/	93.27/	92.74
.E5 :0508:/	92.28/	91.70/	91.09/	90.67
.E6 :0509:/	90.35/	89.97/	89.61/	89.40
.E7 :0510:/	89.28/	89.07/	88.81/	88.61
.E8 :0511:/	88.38/	88.01/	87.62/	87.33
.E9 :0512:/	87.08/	86.72/	86.34/	86.09
.E10 :0513:/	85.86/	85.53/	85.16/	84.91
.E11 :0514:/	84.71/	84.40/	84.01/	83.70
.E12 :0515:/	83.48/	83.20/	82.83/	82.49
.E13 :0516:/	82.26/	82.04/	81.70/	81.33
.E14 :0517:/	81.06/	80.85/	80.55/	80.21

.E15 :0518:/	79.98/	79.81/	79.54/	79.23
.E16 :0519:/	79.03/	78.88/	78.63/	78.34
.E17 :0520:/	78.16/	78.03/	77.81/	77.53
.E18 :0521:/	77.36/	77.23/	77.00/	76.71
.E19 :0522:/	76.51/	76.37/	76.13/	75.83
.E20 :0523:/	75.63/	75.47/	75.22/	74.92
.E21 :0524:/	74.71/	74.54/	74.28/	73.97
.E22 :0525:/	73.74/	73.57/	73.30/	72.98
.E23 :0526:/	72.75/	72.58/	72.31/	72.01
.E24 :0527:/	71.79/	71.63/	71.38/	71.08
.E25 :0528:/	70.88/	70.73/	70.49/	70.21
.E26 :0529:/	70.02/	69.88/	69.67/	69.40
.E27 :0530:/	69.23			

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:ATCHISON KS NO.1 - MISSOURI RIVER HSA - EAX

:FLOOD STAGE 22.0 FCST ISSUANCE STAGE 20.0

:

:LATEST ESTIMATED STAGE 20.5 FT AT 1200Z ON 0504 .AR ATCK1 20110504 DH1200/HGIPX 20.50E

.ER ATCK1 20110504 Z DC201105041420/DH18/HGIFX/DIH6

:QPF FCST	12Z	18Z	0Z	6Z
.E1 :0504:/	/	20.5/	20.4/	20.4
.E2 :0505:/	20.3/	20.2/	20.2/	20.1
.E3 :0506:/	20.1/	20.0/	19.9/	19.9
.E4 :0507:/	19.8/	19.7/	19.6/	19.5
.E5 :0508:/	19.5/	19.4/	19.3/	19.2
.E6 :0509:/	19.2/	19.1/	19.1/	19.0
.E7 :0510:/	19.0/	19.0/	18.9/	18.9
.E8 :0511:/	18.9/	18.8/	18.8/	18.7
.E9 :0512:/	18.6/	18.6/	18.5/	18.5
.E10 :0513:/	18.4/	18.4/	18.3/	18.3
.E11 :0514:/	18.2/	18.2/	18.2/	18.1
.E12 :0515:/	18.0/	18.0/	17.9/	17.9
.E13 :0516:/	17.8/	17.8/	17.7/	17.6
.E14 :0517:/	17.6/	17.5/	17.5/	17.4
.E15 :0518:/	17.4/	17.3/	17.3/	17.2
.E16 :0519:/	17.2/	17.1/	17.1/	17.0
.E17 :0520:/	17.0/	16.9/	16.9/	16.9
.E18 :0521:/	16.8/	16.8/	16.8/	16.7
.E19 :0522:/	16.7/	16.6/	16.6/	16.6
.E20 :0523:/	16.5/	16.5/	16.5/	16.4
.E21 :0524:/	16.4/	16.3/	16.3/	16.2
.E22 :0525:/	16.2/	16.1/	16.1/	16.1
.E23 :0526:/	16.0/	16.0/	15.9/	15.9
.E24 :0527:/	15.8/	15.8/	15.8/	15.7
.E25 :0528:/	15.7/	15.6/	15.6/	15.5
.E26 :0529:/	15.5/	15.5/	15.4/	15.4
.E27 :0530:/	15.4			

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:KANSAS CITY MO - MISSOURI RIVER HSA - EAX

:FLOOD STAGE 32.0 FCST ISSUANCE STAGE 30.0

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:LATEST STAGE 19.0 FT AT 1330Z ON 0504

.ER KCDM7 20110504 Z DC201105041420/DH18/HGIFX/DIH6

:QPF FCST	12Z	18Z	0Z	6Z
.E1 :0504:/	/	18.9/	18.8/	18.8
.E2 :0505:/	18.8/	18.7/	18.6/	18.6
.E3 :0506:/	18.5/	18.4/	18.3/	18.3

.E4 :0507:/	18.2/	18.1/	18.1/	18.0
.E5 :0508:/	17.9/	17.8/	17.8/	17.7
.E6 :0509:/	17.6/	17.6/	17.5/	17.5
.E7 :0510:/	17.4/	17.4/	17.4/	17.4
.E8 :0511:/	17.3/	17.3/	17.3/	17.2
.E9 :0512:/	17.2/	17.1/	17.1/	17.0
.E10 :0513:/	17.0/	17.0/	16.9/	16.9
.E11 :0514:/	16.8/	16.8/	16.7/	16.7
.E12 :0515:/	16.7/	16.6/	16.6/	16.5
.E13 :0516:/	16.5/	16.4/	16.4/	16.4
.E14 :0517:/	16.3/	16.3/	16.2/	16.2
.E15 :0518:/	16.2/	16.1/	16.1/	16.0
.E16 :0519:/	16.0/	16.0/	15.9/	15.9
.E17 :0520:/	15.9/	15.8/	15.8/	15.8
.E18 :0521:/	15.7/	15.7/	15.7/	15.6
.E19 :0522:/	15.6/	15.6/	15.5/	15.5
.E20 :0523:/	15.5/	15.5/	15.4/	15.4
.E21 :0524:/	15.4/	15.3/	15.3/	15.2
.E22 :0525:/	15.2/	15.2/	15.1/	15.1
.E23 :0526:/	15.1/	15.0/	15.0/	14.9
.E24 :0527:/	14.9/	14.9/	14.8/	14.8
.E25 :0528:/	14.8/	14.7/	14.7/	14.6
.E26 :0529:/	14.6/	14.6/	14.5/	14.5
.E27 :0530:/	14.5			
.ER KCDM7 20110504 Z DC201105041420/DH18/QRIF/DIR6				
:QPF FCST	12Z	18Z	0Z	6Z
.E1 :0504:/	/	101.81/	101.60/	101.38
.E2 :0505:/	100.94/	100.31/	99.76/	99.20
.E3 :0506:/	98.68/	98.16/	97.56/	96.92
.E4 :0507:/	96.34/	95.86/	95.40/	94.84
.E5 :0508:/	94.18/	93.56/	93.01/	92.48
.E6 :0509:/	91.97/	91.51/	91.14/	90.82
.E7 :0510:/	90.51/	90.26/	90.07/	89.88
.E8 :0511:/	89.67/	89.45/	89.21/	88.91
.E9 :0512:/	88.57/	88.22/	87.90/	87.57
.E10 :0513:/	87.23/	86.90/	86.60/	86.30
.E11 :0514:/	85.98/	85.67/	85.40/	85.11
.E12 :0515:/	84.79/	84.47/	84.17/	83.88
.E13 :0516:/	83.57/	83.24/	82.94/	82.66
.E14 :0517:/	82.37/	82.05/	81.74/	81.45
.E15 :0518:/	81.17/	80.87/	80.59/	80.34
.E16 :0519:/	80.10/	79.83/	79.58/	79.36
.E17 :0520:/	79.14/	78.90/	78.67/	78.47
.E18 :0521:/	78.27/	78.04/	77.82/	77.63
.E19 :0522:/	77.43/	77.20/	76.97/	76.76
.E20 :0523:/	76.55/	76.30/	76.06/	75.85
.E21 :0524:/	75.63/	75.38/	75.13/	74.90
.E22 :0525:/	74.67/	74.41/	74.15/	73.91
.E23 :0526:/	73.67/	73.40/	73.14/	72.90
.E24 :0527:/	72.66/	72.40/	72.15/	71.92
.E25 :0528:/	71.69/	71.45/	71.20/	70.99
.E26 :0529:/	70.78/	70.54/	70.32/	70.12
.E27 :0530:/	69.92			
:				
:NAPOLEON MO - MISSOURI RIVER HSA - EAX				
:FLOOD STAGE 17.0 FCST ISSUANCE STAGE 15.0				
:				

:LATEST STAGE 15.5 FT AT 1330Z ON 0504

.ER NAPM7 20110504 Z DC201105041420/DH18/HGIFF/DIH6

:QPF FCST	12Z	18Z	0Z	6Z
.E1 :0504:	/	15.5/	15.4/	15.4
.E2 :0505:/	15.4/	15.4/	15.3/	15.3
.E3 :0506:/	15.3/	15.2/	15.2/	15.1
.E4 :0507:/	15.0/	14.9/	14.9/	14.8
.E5 :0508:/	14.8/	14.7/	14.6/	14.5
.E6 :0509:/	14.5/	14.4/	14.4/	14.3
.E7 :0510:/	14.3/	14.3/	14.2/	14.2
.E8 :0511:/	14.2/	14.1/	14.1/	14.1
.E9 :0512:/	14.1/	14.0/	14.0/	13.9
.E10 :0513:/	13.9/	13.8/	13.8/	13.7
.E11 :0514:/	13.7/	13.7/	13.6/	13.6
.E12 :0515:/	13.5/	13.5/	13.5/	13.4
.E13 :0516:/	13.4/	13.3/	13.3/	13.2
.E14 :0517:/	13.2/	13.2/	13.1/	13.1
.E15 :0518:/	13.0/	13.0/	13.0/	12.9
.E16 :0519:/	12.9/	12.9/	12.8/	12.8
.E17 :0520:/	12.8/	12.7/	12.7/	12.7
.E18 :0521:/	12.6/	12.6/	12.6/	12.5
.E19 :0522:/	12.5/	12.5/	12.5/	12.4
.E20 :0523:/	12.4/	12.4/	12.3/	12.3
.E21 :0524:/	12.3/	12.2/	12.2/	12.2
.E22 :0525:/	12.1/	12.1/	12.1/	12.0
.E23 :0526:/	12.0/	12.0/	11.9/	11.9
.E24 :0527:/	11.9/	11.8/	11.8/	11.8
.E25 :0528:/	11.7/	11.7/	11.7/	11.6
.E26 :0529:/	11.6/	11.6/	11.5/	11.5
.E27 :0530:/	11.5			

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:WAVERLY MO - MISSOURI RIVER HSA - EAX

:FLOOD STAGE 20.0 FCST ISSUANCE STAGE 18.0

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:LATEST STAGE 18.4 FT AT 1330Z ON 0504

.ER WVYM7 20110504 Z DC201105041420/DH18/HGIFF/DIH6

:QPF FCST	12Z	18Z	0Z	6Z
.E1 :0504:	/	18.3/	18.3/	18.3
.E2 :0505:/	18.3/	18.3/	18.3/	18.2
.E3 :0506:/	18.2/	18.2/	18.1/	18.1
.E4 :0507:/	18.0/	18.0/	17.9/	17.9
.E5 :0508:/	17.8/	17.7/	17.7/	17.6
.E6 :0509:/	17.6/	17.5/	17.4/	17.4
.E7 :0510:/	17.4/	17.3/	17.3/	17.3
.E8 :0511:/	17.2/	17.2/	17.2/	17.2
.E9 :0512:/	17.1/	17.1/	17.1/	17.0
.E10 :0513:/	17.0/	17.0/	16.9/	16.9
.E11 :0514:/	16.9/	16.8/	16.8/	16.7
.E12 :0515:/	16.7/	16.7/	16.6/	16.6
.E13 :0516:/	16.6/	16.5/	16.5/	16.5
.E14 :0517:/	16.4/	16.4/	16.4/	16.3
.E15 :0518:/	16.3/	16.3/	16.2/	16.2
.E16 :0519:/	16.2/	16.1/	16.1/	16.1
.E17 :0520:/	16.0/	16.0/	16.0/	16.0
.E18 :0521:/	15.9/	15.9/	15.9/	15.9
.E19 :0522:/	15.8/	15.8/	15.8/	15.8
.E20 :0523:/	15.7/	15.7/	15.7/	15.6

	12Z	18Z	0Z	6Z
.E21 :0524:/	15.6/	15.6/	15.6/	15.5
.E22 :0525:/	15.5/	15.5/	15.4/	15.4
.E23 :0526:/	15.4/	15.3/	15.3/	15.3
.E24 :0527:/	15.3/	15.2/	15.2/	15.2
.E25 :0528:/	15.1/	15.1/	15.1/	15.0
.E26 :0529:/	15.0/	15.0/	15.0/	14.9
.E27 :0530:/	14.9			

.ER WVYM7 20110504 Z DC201105041420/DH18/QRIF/DIR6

	12Z	18Z	0Z	6Z
.E1 :0504:/	/	101.16/	101.20/	101.21
.E2 :0505:/	101.14/	101.00/	100.75/	100.43
.E3 :0506:/	100.06/	99.69/	99.32/	98.91
.E4 :0507:/	98.40/	97.84/	97.27/	96.73
.E5 :0508:/	96.20/	95.63/	95.03/	94.43
.E6 :0509:/	93.85/	93.30/	92.79/	92.33
.E7 :0510:/	91.92/	91.57/	91.26/	90.99
.E8 :0511:/	90.76/	90.55/	90.33/	90.10
.E9 :0512:/	89.85/	89.56/	89.24/	88.91
.E10 :0513:/	88.57/	88.24/	87.90/	87.57
.E11 :0514:/	87.26/	86.94/	86.63/	86.32
.E12 :0515:/	86.02/	85.72/	85.41/	85.10
.E13 :0516:/	84.79/	84.49/	84.17/	83.86
.E14 :0517:/	83.55/	83.26/	82.95/	82.64
.E15 :0518:/	82.34/	82.04/	81.74/	81.45
.E16 :0519:/	81.18/	80.91/	80.65/	80.39
.E17 :0520:/	80.15/	79.91/	79.67/	79.44
.E18 :0521:/	79.21/	79.00/	78.78/	78.56
.E19 :0522:/	78.35/	78.14/	77.93/	77.71
.E20 :0523:/	77.49/	77.26/	77.04/	76.80
.E21 :0524:/	76.57/	76.34/	76.11/	75.87
.E22 :0525:/	75.63/	75.39/	75.14/	74.89
.E23 :0526:/	74.64/	74.39/	74.14/	73.88
.E24 :0527:/	73.62/	73.37/	73.12/	72.87
.E25 :0528:/	72.62/	72.38/	72.14/	71.90
.E26 :0529:/	71.66/	71.44/	71.21/	70.98
.E27 :0530:/	70.76			

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:MIAMI MO - MISSOURI RIVER HSA - EAX

:FLOOD STAGE 18.0 FCST ISSUANCE STAGE 16.0

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:LATEST ESTIMATED STAGE 16.4 FT AT 1200Z ON 0504 .AR MIAM7 20110504 DH1200/HGIPX 16.40E

.ER MIAM7 20110504 Z DC201105041420/DH18/HGIF/DIR6

	12Z	18Z	0Z	6Z
.E1 :0504:/	/	16.4/	16.4/	16.4
.E2 :0505:/	16.4/	16.4/	16.4/	16.3
.E3 :0506:/	16.3/	16.2/	16.2/	16.1
.E4 :0507:/	16.1/	16.0/	16.0/	15.9
.E5 :0508:/	15.8/	15.8/	15.7/	15.6
.E6 :0509:/	15.5/	15.5/	15.4/	15.3
.E7 :0510:/	15.3/	15.2/	15.2/	15.1
.E8 :0511:/	15.1/	15.1/	15.1/	15.0
.E9 :0512:/	15.0/	15.0/	14.9/	14.9
.E10 :0513:/	14.8/	14.8/	14.7/	14.7
.E11 :0514:/	14.6/	14.6/	14.5/	14.5
.E12 :0515:/	14.4/	14.4/	14.3/	14.3
.E13 :0516:/	14.2/	14.2/	14.1/	14.1
.E14 :0517:/	14.1/	14.0/	14.0/	13.9

.E15 :0518:/	13.9/	13.8/	13.8/	13.7
.E16 :0519:/	13.7/	13.6/	13.6/	13.6
.E17 :0520:/	13.5/	13.5/	13.5/	13.4
.E18 :0521:/	13.4/	13.3/	13.3/	13.3
.E19 :0522:/	13.2/	13.2/	13.2/	13.1
.E20 :0523:/	13.1/	13.0/	13.0/	13.0
.E21 :0524:/	12.9/	12.9/	12.9/	12.8
.E22 :0525:/	12.8/	12.7/	12.7/	12.7
.E23 :0526:/	12.6/	12.6/	12.5/	12.5
.E24 :0527:/	12.4/	12.4/	12.4/	12.3
.E25 :0528:/	12.3/	12.2/	12.2/	12.2
.E26 :0529:/	12.1/	12.1/	12.0/	12.0
.E27 :0530:/	12.0			

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:GLASGOW MO - MISSOURI RIVER HSA - EAX
:FLOOD STAGE 25.0 FCST ISSUANCE STAGE 23.0

:

:LATEST STAGE 19.5 FT AT 1330Z ON 0504

.ER GLZM7 20110504 Z DC201105041420/DH18/HGIF/DIH6

:QPF FCST 12Z 18Z 0Z 6Z

.E1 :0504:	/	19.5/	19.5/	19.5
.E2 :0505:/	19.4/	19.4/	19.4/	19.4
.E3 :0506:/	19.4/	19.4/	19.3/	19.3
.E4 :0507:/	19.2/	19.2/	19.1/	19.1
.E5 :0508:/	19.0/	18.9/	18.8/	18.8
.E6 :0509:/	18.7/	18.6/	18.5/	18.4
.E7 :0510:/	18.4/	18.3/	18.2/	18.2
.E8 :0511:/	18.1/	18.1/	18.0/	18.0
.E9 :0512:/	18.0/	17.9/	17.9/	17.8
.E10 :0513:/	17.8/	17.7/	17.7/	17.6
.E11 :0514:/	17.6/	17.5/	17.5/	17.4
.E12 :0515:/	17.4/	17.3/	17.3/	17.2
.E13 :0516:/	17.2/	17.2/	17.1/	17.1
.E14 :0517:/	17.0/	17.0/	16.9/	16.9
.E15 :0518:/	16.8/	16.8/	16.7/	16.7
.E16 :0519:/	16.7/	16.6/	16.6/	16.5
.E17 :0520:/	16.5/	16.4/	16.4/	16.4
.E18 :0521:/	16.3/	16.3/	16.3/	16.2
.E19 :0522:/	16.2/	16.2/	16.1/	16.1
.E20 :0523:/	16.1/	16.0/	16.0/	15.9
.E21 :0524:/	15.9/	15.9/	15.8/	15.8
.E22 :0525:/	15.8/	15.7/	15.7/	15.6
.E23 :0526:/	15.6/	15.6/	15.5/	15.5
.E24 :0527:/	15.4/	15.4/	15.4/	15.3
.E25 :0528:/	15.3/	15.2/	15.2/	15.2
.E26 :0529:/	15.1/	15.1/	15.0/	15.0
.E27 :0530:/	15.0			

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:BOONVILLE MO - MISSOURI RIVER HSA - EAX
:FLOOD STAGE 21.0 FCST ISSUANCE STAGE 19.0

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:LATEST STAGE 16.0 FT AT 1330Z ON 0504

.ER BOZM7 20110504 Z DC201105041420/DH18/HGIF/DIH6

:QPF FCST 12Z 18Z 0Z 6Z

.E1 :0504:	/	16.0/	15.9/	15.9
.E2 :0505:/	15.9/	15.9/	15.9/	15.9
.E3 :0506:/	15.8/	15.8/	15.8/	15.8

.E4 :0507:/	15.8/	15.7/	15.7/	15.7
.E5 :0508:/	15.6/	15.6/	15.5/	15.5
.E6 :0509:/	15.4/	15.3/	15.3/	15.2
.E7 :0510:/	15.2/	15.1/	15.1/	15.0
.E8 :0511:/	15.0/	14.9/	14.9/	14.8
.E9 :0512:/	14.8/	14.8/	14.7/	14.7
.E10 :0513:/	14.7/	14.6/	14.6/	14.5
.E11 :0514:/	14.5/	14.4/	14.4/	14.4
.E12 :0515:/	14.3/	14.3/	14.2/	14.2
.E13 :0516:/	14.2/	14.1/	14.1/	14.1
.E14 :0517:/	14.0/	14.0/	13.9/	13.9
.E15 :0518:/	13.9/	13.8/	13.8/	13.8
.E16 :0519:/	13.7/	13.7/	13.6/	13.6
.E17 :0520:/	13.6/	13.5/	13.5/	13.5
.E18 :0521:/	13.4/	13.4/	13.4/	13.3
.E19 :0522:/	13.3/	13.3/	13.3/	13.2
.E20 :0523:/	13.2/	13.2/	13.1/	13.1
.E21 :0524:/	13.1/	13.1/	13.0/	13.0
.E22 :0525:/	13.0/	12.9/	12.9/	12.9
.E23 :0526:/	12.8/	12.8/	12.8/	12.7
.E24 :0527:/	12.7/	12.7/	12.6/	12.6
.E25 :0528:/	12.6/	12.5/	12.5/	12.5
.E26 :0529:/	12.4/	12.4/	12.4/	12.3
.E27 :0530:/	12.3			
.ER BOZM7 20110504 Z DC201105041420/DH18/QRIF/DIR6				
:QPF FCST	12Z	18Z	0Z	6Z
.E1 :0504:/	/	109.58/	109.22/	108.88
.E2 :0505:/	108.64/	108.53/	108.49/	108.46
.E3 :0506:/	108.40/	108.29/	108.12/	107.88
.E4 :0507:/	107.54/	107.16/	106.76/	106.34
.E5 :0508:/	105.86/	105.33/	104.79/	104.25
.E6 :0509:/	103.71/	103.11/	102.50/	101.86
.E7 :0510:/	101.24/	100.64/	100.07/	99.54
.E8 :0511:/	99.06/	98.63/	98.24/	97.88
.E9 :0512:/	97.57/	97.27/	96.99/	96.69
.E10 :0513:/	96.36/	96.00/	95.61/	95.20
.E11 :0514:/	94.78/	94.37/	93.96/	93.56
.E12 :0515:/	93.18/	92.82/	92.46/	92.11
.E13 :0516:/	91.78/	91.44/	91.10/	90.75
.E14 :0517:/	90.41/	90.07/	89.73/	89.39
.E15 :0518:/	89.05/	88.71/	88.38/	88.05
.E16 :0519:/	87.71/	87.38/	87.06/	86.74
.E17 :0520:/	86.43/	86.13/	85.84/	85.55
.E18 :0521:/	85.28/	85.01/	84.74/	84.48
.E19 :0522:/	84.23/	83.98/	83.74/	83.50
.E20 :0523:/	83.26/	83.03/	82.79/	82.55
.E21 :0524:/	82.30/	82.06/	81.81/	81.56
.E22 :0525:/	81.31/	81.05/	80.80/	80.54
.E23 :0526:/	80.28/	80.02/	79.76/	79.49
.E24 :0527:/	79.22/	78.95/	78.68/	78.40
.E25 :0528:/	78.13/	77.86/	77.59/	77.32
.E26 :0529:/	77.05/	76.79/	76.53/	76.28
.E27 :0530:/	76.02			
:				
:JEFFERSON CITY MO - MISSOURI RIVER HSA - LSX				
:FLOOD STAGE 23.0 FCST ISSUANCE STAGE 21.0				
:				

:LATEST STAGE 15.4 FT AT 1400Z ON 0504

.ER JFFM7 20110504 Z DC201105041420/DH18/HGIF/DIH6

:QPF FCST	12Z	18Z	0Z	6Z
.E1 :0504:	/	15.4/	15.4/	15.3
.E2 :0505:/	15.3/	15.3/	15.2/	15.2
.E3 :0506:/	15.2/	15.2/	15.2/	15.2
.E4 :0507:/	15.2/	15.2/	15.2/	15.1
.E5 :0508:/	15.1/	15.1/	15.0/	15.0
.E6 :0509:/	14.9/	14.9/	14.8/	14.7
.E7 :0510:/	14.7/	14.6/	14.5/	14.5
.E8 :0511:/	14.4/	14.3/	14.3/	14.2
.E9 :0512:/	14.2/	14.2/	14.1/	14.1
.E10 :0513:/	14.0/	14.0/	14.0/	13.9
.E11 :0514:/	13.9/	13.8/	13.8/	13.7
.E12 :0515:/	13.7/	13.6/	13.6/	13.6
.E13 :0516:/	13.5/	13.5/	13.4/	13.4
.E14 :0517:/	13.3/	13.3/	13.3/	13.2
.E15 :0518:/	13.2/	13.1/	13.1/	13.1
.E16 :0519:/	13.0/	13.0/	12.9/	12.9
.E17 :0520:/	12.9/	12.8/	12.8/	12.7
.E18 :0521:/	12.7/	12.7/	12.6/	12.6
.E19 :0522:/	12.6/	12.5/	12.5/	12.5
.E20 :0523:/	12.5/	12.4/	12.4/	12.4
.E21 :0524:/	12.3/	12.3/	12.3/	12.3
.E22 :0525:/	12.2/	12.2/	12.2/	12.1
.E23 :0526:/	12.1/	12.1/	12.0/	12.0
.E24 :0527:/	12.0/	11.9/	11.9/	11.9
.E25 :0528:/	11.8/	11.8/	11.7/	11.7
.E26 :0529:/	11.7/	11.6/	11.6/	11.6
.E27 :0530:/	11.5			

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:CHAMMOIS MO - MISSOURI RIVER HSA - LSX

:FLOOD STAGE 17.0 FCST ISSUANCE STAGE 15.0

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:LATEST STAGE 11.2 FT AT 1200Z ON 0504

.ER CMSM7 20110504 Z DC201105041420/DH18/HGIF/DIH6

:QPF FCST	12Z	18Z	0Z	6Z
.E1 :0504:	/	11.2/	11.1/	11.0
.E2 :0505:/	10.9/	10.8/	10.7/	10.6
.E3 :0506:/	10.6/	10.5/	10.5/	10.4
.E4 :0507:/	10.4/	10.3/	10.3/	10.4
.E5 :0508:/	10.8/	11.5/	11.7/	11.7
.E6 :0509:/	11.6/	11.6/	11.5/	11.5
.E7 :0510:/	11.4/	11.4/	11.3/	11.2
.E8 :0511:/	11.1/	11.1/	11.0/	11.0
.E9 :0512:/	10.9/	10.9/	10.8/	10.8
.E10 :0513:/	10.7/	10.7/	10.7/	10.6
.E11 :0514:/	10.6/	10.5/	10.5/	10.4
.E12 :0515:/	10.4/	10.4/	10.3/	10.3
.E13 :0516:/	10.2/	10.2/	10.1/	10.1
.E14 :0517:/	10.1/	10.0/	10.0/	9.9
.E15 :0518:/	9.9/	9.9/	9.8/	9.8
.E16 :0519:/	9.7/	9.7/	9.7/	9.6
.E17 :0520:/	9.6/	9.6/	9.5/	9.5
.E18 :0521:/	9.4/	9.4/	9.4/	9.3
.E19 :0522:/	9.3/	9.3/	9.2/	9.2
.E20 :0523:/	9.2/	9.1/	9.1/	9.1

.E21 :0524:/	9.1/	9.0/	9.0/	9.0
.E22 :0525:/	8.9/	8.9/	8.9/	8.9
.E23 :0526:/	8.8/	8.8/	8.8/	8.7
.E24 :0527:/	8.7/	8.7/	8.6/	8.6
.E25 :0528:/	8.6/	8.5/	8.5/	8.5
.E26 :0529:/	8.4/	8.4/	8.4/	8.4
.E27 :0530:/	8.3			

:

:GASCONADE MO - MISSOURI RIVER HSA - LSX
:FLOOD STAGE 22.0 FCST ISSUANCE STAGE 20.0

:

:LATEST ESTIMATED STAGE 18.2 FT AT 1200Z ON 0504 .AR GSCM7 20110504 DH1200/HGIPX 18.20E
.ER GSCM7 20110504 Z DC201105041420/DH18/HGIF/DIH6

:QPF FCST	12Z	18Z	0Z	6Z
.E1 :0504:	/	18.2/	18.1/	18.0
.E2 :0505:/	17.9/	17.8/	17.7/	17.6
.E3 :0506:/	17.5/	17.5/	17.4/	17.3
.E4 :0507:/	17.3/	17.2/	17.2/	17.2
.E5 :0508:/	17.5/	18.0/	18.5/	18.6
.E6 :0509:/	18.7/	18.7/	18.6/	18.6
.E7 :0510:/	18.5/	18.4/	18.3/	18.3
.E8 :0511:/	18.2/	18.1/	18.0/	18.0
.E9 :0512:/	17.9/	17.8/	17.8/	17.7
.E10 :0513:/	17.7/	17.6/	17.6/	17.6
.E11 :0514:/	17.5/	17.5/	17.4/	17.4
.E12 :0515:/	17.3/	17.2/	17.2/	17.1
.E13 :0516:/	17.1/	17.0/	17.0/	16.9
.E14 :0517:/	16.9/	16.8/	16.8/	16.8
.E15 :0518:/	16.7/	16.7/	16.6/	16.6
.E16 :0519:/	16.5/	16.5/	16.4/	16.4
.E17 :0520:/	16.3/	16.3/	16.2/	16.2
.E18 :0521:/	16.2/	16.1/	16.1/	16.0
.E19 :0522:/	16.0/	16.0/	15.9/	15.9
.E20 :0523:/	15.9/	15.8/	15.8/	15.8
.E21 :0524:/	15.7/	15.7/	15.7/	15.6
.E22 :0525:/	15.6/	15.6/	15.5/	15.5
.E23 :0526:/	15.5/	15.4/	15.4/	15.4
.E24 :0527:/	15.3/	15.3/	15.3/	15.2
.E25 :0528:/	15.2/	15.1/	15.1/	15.1
.E26 :0529:/	15.0/	15.0/	15.0/	14.9
.E27 :0530:/	14.9			

:

:HERMANN MO - MISSOURI RIVER HSA - LSX
:FLOOD STAGE 21.0 FCST ISSUANCE STAGE 19.0

:

:LATEST STAGE 16.5 FT AT 1330Z ON 0504
.ER HRNM7 20110504 Z DC201105041420/DH18/HGIF/DIH6

:QPF FCST	12Z	18Z	0Z	6Z
.E1 :0504:	/	16.4/	16.4/	16.4
.E2 :0505:/	16.3/	16.2/	16.1/	16.0
.E3 :0506:/	15.8/	15.6/	15.4/	15.3
.E4 :0507:/	15.1/	14.9/	14.8/	14.8
.E5 :0508:/	14.9/	15.2/	15.5/	15.6
.E6 :0509:/	15.5/	15.5/	15.4/	15.4
.E7 :0510:/	15.3/	15.2/	15.1/	15.0
.E8 :0511:/	15.0/	14.9/	14.8/	14.8
.E9 :0512:/	14.7/	14.7/	14.6/	14.6

.E10 :0513:/	14.5/	14.5/	14.5/	14.4
.E11 :0514:/	14.4/	14.4/	14.3/	14.3
.E12 :0515:/	14.2/	14.2/	14.2/	14.1
.E13 :0516:/	14.1/	14.0/	14.0/	14.0
.E14 :0517:/	13.9/	13.9/	13.8/	13.8
.E15 :0518:/	13.7/	13.7/	13.6/	13.6
.E16 :0519:/	13.6/	13.5/	13.5/	13.4
.E17 :0520:/	13.4/	13.3/	13.3/	13.3
.E18 :0521:/	13.2/	13.2/	13.2/	13.1
.E19 :0522:/	13.1/	13.0/	13.0/	13.0
.E20 :0523:/	12.9/	12.9/	12.9/	12.9
.E21 :0524:/	12.8/	12.8/	12.8/	12.7
.E22 :0525:/	12.7/	12.7/	12.6/	12.6
.E23 :0526:/	12.6/	12.5/	12.5/	12.5
.E24 :0527:/	12.5/	12.4/	12.4/	12.4
.E25 :0528:/	12.3/	12.3/	12.3/	12.2
.E26 :0529:/	12.2/	12.2/	12.1/	12.1
.E27 :0530:/	12.1			

.ER HRNM7 20110504 Z DC201105041420/DH18/QRIF/DIR6

:QPF FCST	12Z	18Z	0Z	6Z
.E1 :0504:	/	141.65/	142.26/	141.95
.E2 :0505:/	140.82/	139.69/	138.56/	136.93
.E3 :0506:/	135.00/	133.04/	131.19/	129.50
.E4 :0507:/	127.91/	126.37/	124.96/	124.31
.E5 :0508:/	125.97/	129.48/	132.08/	132.81
.E6 :0509:/	132.46/	132.04/	131.42/	130.69
.E7 :0510:/	129.89/	129.08/	128.29/	127.49
.E8 :0511:/	126.72/	125.98/	125.27/	124.60
.E9 :0512:/	123.99/	123.42/	122.90/	122.43
.E10 :0513:/	122.00/	121.59/	121.20/	120.80
.E11 :0514:/	120.40/	119.98/	119.54/	119.08
.E12 :0515:/	118.62/	118.16/	117.70/	117.25
.E13 :0516:/	116.81/	116.38/	115.96/	115.55
.E14 :0517:/	115.16/	114.76/	114.37/	113.98
.E15 :0518:/	113.59/	113.19/	112.79/	112.39
.E16 :0519:/	112.00/	111.62/	111.24/	110.86
.E17 :0520:/	110.49/	110.12/	109.75/	109.39
.E18 :0521:/	109.04/	108.69/	108.36/	108.03
.E19 :0522:/	107.71/	107.40/	107.09/	106.79
.E20 :0523:/	106.50/	106.21/	105.93/	105.65
.E21 :0524:/	105.37/	105.10/	104.82/	104.55
.E22 :0525:/	104.27/	103.99/	103.71/	103.43
.E23 :0526:/	103.14/	102.86/	102.57/	102.28
.E24 :0527:/	101.99/	101.70/	101.40/	101.11
.E25 :0528:/	100.81/	100.51/	100.21/	99.91
.E26 :0529:/	99.60/	99.30/	99.00/	98.71
.E27 :0530:/	98.41			

:
:WASHINGTON MO - MISSOURI RIVER HSA - LSX
:FLOOD STAGE 20.0 FCST ISSUANCE STAGE 18.0
:

:LATEST STAGE 13.1 FT AT 1345Z ON 0504

:QPF FCST	12Z	18Z	0Z	6Z
.E1 :0504:	/	13.0/	12.9/	12.9
.E2 :0505:/	12.9/	12.8/	12.7/	12.7
.E3 :0506:/	12.6/	12.5/	12.3/	12.2

.E4 :0507:/	12.1/	11.9/	11.7/	11.6
.E5 :0508:/	11.5/	11.5/	11.7/	12.0
.E6 :0509:/	12.1/	12.1/	12.2/	12.1
.E7 :0510:/	12.1/	12.1/	12.0/	12.0
.E8 :0511:/	11.9/	11.8/	11.7/	11.7
.E9 :0512:/	11.6/	11.6/	11.5/	11.4
.E10 :0513:/	11.4/	11.4/	11.3/	11.3
.E11 :0514:/	11.2/	11.2/	11.2/	11.1
.E12 :0515:/	11.1/	11.0/	11.0/	10.9
.E13 :0516:/	10.9/	10.8/	10.8/	10.7
.E14 :0517:/	10.7/	10.6/	10.6/	10.6
.E15 :0518:/	10.5/	10.5/	10.4/	10.4
.E16 :0519:/	10.3/	10.3/	10.3/	10.2
.E17 :0520:/	10.2/	10.1/	10.1/	10.1
.E18 :0521:/	10.0/	10.0/	9.9/	9.9
.E19 :0522:/	9.9/	9.8/	9.8/	9.8
.E20 :0523:/	9.7/	9.7/	9.6/	9.6
.E21 :0524:/	9.6/	9.5/	9.5/	9.5
.E22 :0525:/	9.5/	9.4/	9.4/	9.4
.E23 :0526:/	9.3/	9.3/	9.3/	9.2
.E24 :0527:/	9.2/	9.2/	9.1/	9.1
.E25 :0528:/	9.1/	9.0/	9.0/	8.9
.E26 :0529:/	8.9/	8.9/	8.8/	8.8
.E27 :0530:/	8.8			

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:ST CHARLES MO 1E - MISSOURI RIVER HSA - LSX

:FLOOD STAGE 25.0 FCST ISSUANCE STAGE 23.0

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:LATEST STAGE 20.2 FT AT 1400Z ON 0504

.ER SCLM7 20110504 Z DC201105041420/DH18/HGIFF/DIH6

:QPF FCST	12Z	18Z	0Z	6Z
.E1 :0504:	/	20.1/	20.0/	19.8
.E2 :0505:/	19.7/	19.7/	19.6/	19.6
.E3 :0506:/	19.5/	19.5/	19.4/	19.2
.E4 :0507:/	19.1/	19.0/	18.8/	18.7
.E5 :0508:/	18.6/	18.5/	18.4/	18.5
.E6 :0509:/	18.6/	18.7/	18.8/	18.9
.E7 :0510:/	18.9/	18.9/	18.9/	18.8
.E8 :0511:/	18.8/	18.7/	18.7/	18.6
.E9 :0512:/	18.6/	18.5/	18.5/	18.4
.E10 :0513:/	18.4/	18.3/	18.3/	18.3
.E11 :0514:/	18.2/	18.2/	18.2/	18.1
.E12 :0515:/	18.1/	18.1/	18.0/	18.0
.E13 :0516:/	17.9/	17.9/	17.9/	17.8
.E14 :0517:/	17.8/	17.7/	17.7/	17.7
.E15 :0518:/	17.6/	17.6/	17.5/	17.5
.E16 :0519:/	17.5/	17.4/	17.4/	17.4
.E17 :0520:/	17.3/	17.3/	17.3/	17.2
.E18 :0521:/	17.2/	17.2/	17.1/	17.1
.E19 :0522:/	17.1/	17.0/	17.0/	17.0
.E20 :0523:/	16.9/	16.9/	16.9/	16.8
.E21 :0524:/	16.8/	16.8/	16.7/	16.7
.E22 :0525:/	16.7/	16.7/	16.6/	16.6
.E23 :0526:/	16.6/	16.6/	16.5/	16.5
.E24 :0527:/	16.5/	16.4/	16.4/	16.4
.E25 :0528:/	16.4/	16.3/	16.3/	16.3
.E26 :0529:/	16.2/	16.2/	16.2/	16.1

.E27 :0530:/ 16.1

:COMMENT

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:wao

:...END of MESSAGE...

Classification: UNCLASSIFIED

Caveats: NONE

[REDACTED] NWO

From: [REDACTED] NWD02
Sent: Wednesday, May 04, 2011 1:36 PM
To: Farhat, Jody S NWD02
Subject: RE: Missouri River Forecast (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Okay.

[REDACTED]
Missouri River Basin Water Management,
Northwestern Division, USACE

[REDACTED] (fax)

-----Original Message-----

From: Farhat, Jody S NWD02
Sent: Wednesday, May 04, 2011 1:21 PM
To: [REDACTED] NWD02; [REDACTED] NWD02
Subject: FW: Missouri River Forecast (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

We need to provide NWS with our come-up schedule when we start showing it in FUI.

Jody

-----Original Message-----

From: ldm@ls1-krf.krf.noaa.gov [mailto:ldm@ls1-krf.krf.noaa.gov]
Sent: Wednesday, May 04, 2011 9:30 AM
To: Farhat, Jody S NWD02
Subject: Missouri River Forecast

ZCZC MKCRVFMOM DEF
TTAA00 KKRK DDHHMM
RVFMOM

RIVER FORECAST

NWS MISSOURI BASIN RIVER FORECAST CENTER PLEASANT HILL MO 1420Z WED MAY 04 2011

:
: THIS PRODUCT HAS PRELIMINARY DATA THAT MAY BE SUBJECT TO REVISION.
: REFER TO YOUR LOCAL WFO FOR THE LATEST OFFICIAL RIVER FORECAST.

: FORECAST GROUP IS MOMAIN LONG RANGE

: ==> This forecast includes obsd precip & 24 hours of QPF <==

RIVER/STATION	FS	TDY	F O R E C A S T
MISSOURI RIVER			
NEBRASKA CITY NE	18.0	19.3	FALL BELOW FS 05/11
BROWNVILLE NE	33.0	35.0	FALL BELOW FS 05/11

RULO NE	17.0	18.2	FALL BELOW FS 05/11
ST JOSEPH MO	17.0	17.5	FALL BELOW FS 05/07 AM
ATCHISON KS NO.1	22.0	20.5E	CONTINUE TO FALL
NAPOLEON MO	17.0	15.5	CONTINUE TO FALL
WAVERLY MO	20.0	18.4	LITTLE CHANGE NEXT 24 HOURS
MIAMI MO	18.0	16.4E	LITTLE CHANGE NEXT 24 HOURS

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:GAVINS PT RES NE - MISSOURI RIVER

:LATEST ESTIMATED DISCHARGE 45.00 KCFS AT 1200Z ON 0504

.ER GPDN1REL 20110504 Z DC201105041420/DH18/QTIFF/DIH6

:QPF FCST	12Z	18Z	0Z	6Z
.E1 :0504:/	/	45.00/	45.00/	45.00
.E2 :0505:/	45.00/	45.00/	45.00/	45.00
.E3 :0506:/	45.00/	45.00/	45.00/	45.00
.E4 :0507:/	45.00/	45.00/	45.00/	45.00
.E5 :0508:/	45.00/	45.00/	45.00/	45.00
.E6 :0509:/	45.00/	45.00/	45.00/	45.00
.E7 :0510:/	45.00/	45.00/	45.00/	45.00
.E8 :0511:/	45.00/	45.00/	45.00/	45.00
.E9 :0512:/	45.00/	45.00/	45.00/	45.00
.E10 :0513:/	45.00/	45.00/	45.00/	45.00
.E11 :0514:/	45.00/	45.00/	45.00/	45.00
.E12 :0515:/	45.00/	45.00/	45.00/	45.00
.E13 :0516:/	45.00/	45.00/	45.00/	45.00
.E14 :0517:/	45.00/	45.00/	45.00/	45.00
.E15 :0518:/	45.00/	45.00/	45.00/	45.00
.E16 :0519:/	45.00/	45.00/	45.00/	45.00
.E17 :0520:/	45.00/	45.00/	45.00/	45.00
.E18 :0521:/	45.00/	45.00/	45.00/	45.00
.E19 :0522:/	45.00/	45.00/	45.00/	45.00
.E20 :0523:/	45.00/	45.00/	45.00/	45.00
.E21 :0524:/	45.00/	45.00/	45.00/	45.00
.E22 :0525:/	45.00/	45.00/	45.00/	45.00
.E23 :0526:/	45.00/	45.00/	45.00/	45.00
.E24 :0527:/	45.00/	45.00/	45.00/	45.00
.E25 :0528:/	45.00/	45.00/	45.00/	45.00
.E26 :0529:/	45.00/	45.00/	45.00/	45.00
.E27 :0530:/	45.00			

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:BAGNELL RES MO - OSAGE RIVER

:LATEST ESTIMATED DISCHARGE 3.32 KCFS AT 1200Z ON 0504

.ER LKSM7REL 20110504 Z DC201105041420/DH18/QTIFF/DIH6

:QPF FCST	12Z	18Z	0Z	6Z
.E1 :0504:/	/	3.00/	3.00/	3.00
.E2 :0505:/	2.30/	2.30/	2.30/	2.30
.E3 :0506:/	2.00/	2.00/	2.00/	2.00
.E4 :0507:/	18.00/	18.00/	18.00/	18.00
.E5 :0508:/	18.00/	18.00/	18.00/	18.00
.E6 :0509:/	18.00/	18.00/	18.00/	18.00
.E7 :0510:/	18.00/	18.00/	18.00/	18.00

.E8 :0511:/	18.00/	18.00/	18.00/	18.00
.E9 :0512:/	18.00/	18.00/	18.00/	18.00
.E10 :0513:/	18.00/	18.00/	18.00/	18.00
.E11 :0514:/	18.00/	18.00/	18.00/	18.00
.E12 :0515:/	18.00/	18.00/	18.00/	18.00
.E13 :0516:/	18.00/	18.00/	18.00/	18.00
.E14 :0517:/	18.00/	18.00/	18.00/	18.00
.E15 :0518:/	18.00/	18.00/	18.00/	18.00
.E16 :0519:/	18.00/	18.00/	18.00/	18.00
.E17 :0520:/	18.00/	18.00/	18.00/	18.00
.E18 :0521:/	18.00/	18.00/	18.00/	18.00
.E19 :0522:/	18.00/	18.00/	18.00/	18.00
.E20 :0523:/	18.00/	18.00/	18.00/	18.00
.E21 :0524:/	18.00/	18.00/	18.00/	18.00
.E22 :0525:/	18.00/	18.00/	18.00/	18.00
.E23 :0526:/	18.00/	18.00/	18.00/	18.00
.E24 :0527:/	18.00/	18.00/	18.00/	18.00
.E25 :0528:/	18.00/	18.00/	18.00/	18.00
.E26 :0529:/	18.00/	18.00/	18.00/	18.00
.E27 :0530:/	18.00			

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:SOUTH SIOUX CITY NE - MISSOURI RIVER HSA - FSD

:FLOOD STAGE 30.0 FCST ISSUANCE STAGE 28.0

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:LATEST STAGE 23.9 FT AT 1400Z ON 0504

.ER SSCN1 20110504 Z DC201105041420/DH18/HGIFF/DIH6

:QPF FCST 12Z 18Z 0Z 6Z

.E1 :0504:	/	23.9/	23.9/	23.8
.E2 :0505:/	23.8/	23.7/	23.7/	23.6
.E3 :0506:/	23.6/	23.5/	23.5/	23.4
.E4 :0507:/	23.4/	23.4/	23.3/	23.3
.E5 :0508:/	23.3/	23.2/	23.2/	23.2
.E6 :0509:/	23.1/	23.1/	23.1/	23.0
.E7 :0510:/	23.0/	23.0/	22.9/	22.9
.E8 :0511:/	22.9/	22.9/	22.8/	22.8
.E9 :0512:/	22.8/	22.7/	22.7/	22.7
.E10 :0513:/	22.7/	22.6/	22.6/	22.6
.E11 :0514:/	22.6/	22.5/	22.5/	22.5
.E12 :0515:/	22.4/	22.4/	22.4/	22.4
.E13 :0516:/	22.4/	22.3/	22.3/	22.3
.E14 :0517:/	22.3/	22.2/	22.2/	22.2
.E15 :0518:/	22.2/	22.1/	22.1/	22.1
.E16 :0519:/	22.1/	22.0/	22.0/	22.0
.E17 :0520:/	21.9/	21.9/	21.9/	21.8
.E18 :0521:/	21.8/	21.7/	21.7/	21.7
.E19 :0522:/	21.6/	21.6/	21.6/	21.5
.E20 :0523:/	21.5/	21.4/	21.4/	21.4
.E21 :0524:/	21.3/	21.3/	21.3/	21.2
.E22 :0525:/	21.2/	21.2/	21.1/	21.1
.E23 :0526:/	21.1/	21.0/	21.0/	21.0
.E24 :0527:/	20.9/	20.9/	20.9/	20.8
.E25 :0528:/	20.8/	20.8/	20.8/	20.7
.E26 :0529:/	20.7/	20.7/	20.7/	20.6
.E27 :0530:/	20.6			

.ER SSCN1 20110504 Z DC201105041420/DH18/QRIF/DIH6

:QPF FCST 12Z 18Z 0Z 6Z

.E1 :0504: / 74.11/ 73.85/ 73.59

.E2 :0505:/	73.34/	73.07/	72.77/	72.43
.E3 :0506:/	72.09/	71.76/	71.45/	71.19
.E4 :0507:/	70.96/	70.74/	70.54/	70.33
.E5 :0508:/	70.13/	69.92/	69.72/	69.52
.E6 :0509:/	69.32/	69.13/	68.95/	68.78
.E7 :0510:/	68.61/	68.45/	68.29/	68.14
.E8 :0511:/	67.99/	67.83/	67.68/	67.54
.E9 :0512:/	67.39/	67.24/	67.10/	66.95
.E10 :0513:/	66.79/	66.64/	66.48/	66.33
.E11 :0514:/	66.18/	66.03/	65.89/	65.75
.E12 :0515:/	65.62/	65.50/	65.37/	65.25
.E13 :0516:/	65.12/	65.00/	64.87/	64.74
.E14 :0517:/	64.61/	64.49/	64.36/	64.22
.E15 :0518:/	64.08/	63.94/	63.79/	63.64
.E16 :0519:/	63.49/	63.33/	63.17/	63.00
.E17 :0520:/	62.83/	62.66/	62.48/	62.30
.E18 :0521:/	62.11/	61.92/	61.73/	61.54
.E19 :0522:/	61.34/	61.15/	60.95/	60.76
.E20 :0523:/	60.57/	60.38/	60.19/	60.01
.E21 :0524:/	59.83/	59.65/	59.47/	59.30
.E22 :0525:/	59.13/	58.97/	58.80/	58.65
.E23 :0526:/	58.49/	58.34/	58.19/	58.05
.E24 :0527:/	57.90/	57.77/	57.63/	57.50
.E25 :0528:/	57.38/	57.25/	57.13/	57.02
.E26 :0529:/	56.90/	56.79/	56.69/	56.58
.E27 :0530:/	56.48			

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:OMAHA NE - MISSOURI RIVER HSA - OAX

:FLOOD STAGE 29.0 FCST ISSUANCE STAGE 27.0

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:LATEST STAGE 25.0 FT AT 1400Z ON 0504

.ER OMHN1 20110504 Z DC201105041420/DH18/HGIF/DIH6

:QPF FCST	12Z	18Z	0Z	6Z
.E1 :0504:	/	24.9/	24.8/	24.8
.E2 :0505:/	24.7/	24.7/	24.6/	24.6
.E3 :0506:/	24.5/	24.5/	24.4/	24.4
.E4 :0507:/	24.3/	24.2/	24.2/	24.1
.E5 :0508:/	24.1/	24.0/	24.0/	24.0
.E6 :0509:/	23.9/	23.9/	23.8/	23.8
.E7 :0510:/	23.8/	23.7/	23.7/	23.6
.E8 :0511:/	23.6/	23.6/	23.5/	23.5
.E9 :0512:/	23.5/	23.4/	23.4/	23.4
.E10 :0513:/	23.3/	23.3/	23.3/	23.3
.E11 :0514:/	23.2/	23.2/	23.2/	23.1
.E12 :0515:/	23.1/	23.1/	23.0/	23.0
.E13 :0516:/	23.0/	23.0/	22.9/	22.9
.E14 :0517:/	22.9/	22.8/	22.8/	22.8
.E15 :0518:/	22.8/	22.7/	22.7/	22.7
.E16 :0519:/	22.6/	22.6/	22.6/	22.6
.E17 :0520:/	22.5/	22.5/	22.5/	22.4
.E18 :0521:/	22.4/	22.4/	22.3/	22.3
.E19 :0522:/	22.2/	22.2/	22.2/	22.1
.E20 :0523:/	22.1/	22.1/	22.0/	22.0
.E21 :0524:/	21.9/	21.9/	21.9/	21.8
.E22 :0525:/	21.8/	21.7/	21.7/	21.7
.E23 :0526:/	21.6/	21.6/	21.6/	21.5
.E24 :0527:/	21.5/	21.5/	21.4/	21.4

	21.4/	21.3/	21.3/	21.3
.E25 :0528:/	21.4/	21.3/	21.3/	21.3
.E26 :0529:/	21.2/	21.2/	21.2/	21.2
.E27 :0530:/	21.1			
.ER OMHN1 20110504 Z DC201105041420/DH18/QRIF/ DIH6				
:QPF FCST	12Z	18Z	0Z	6Z
.E1 :0504:	/	81.66/	81.21/	80.95
.E2 :0505:/	80.72/	80.44/	80.18/	79.88
.E3 :0506:/	79.57/	79.25/	78.91/	78.56
.E4 :0507:/	78.18/	77.80/	77.42/	77.08
.E5 :0508:/	76.77/	76.50/	76.26/	76.04
.E6 :0509:/	75.84/	75.59/	75.34/	75.09
.E7 :0510:/	74.85/	74.60/	74.37/	74.15
.E8 :0511:/	73.94/	73.74/	73.55/	73.36
.E9 :0512:/	73.18/	73.00/	72.82/	72.65
.E10 :0513:/	72.47/	72.31/	72.14/	71.97
.E11 :0514:/	71.80/	71.63/	71.45/	71.28
.E12 :0515:/	71.10/	70.92/	70.73/	70.56
.E13 :0516:/	70.39/	70.22/	70.07/	69.91
.E14 :0517:/	69.76/	69.60/	69.45/	69.30
.E15 :0518:/	69.14/	68.99/	68.83/	68.68
.E16 :0519:/	68.52/	68.36/	68.20/	68.03
.E17 :0520:/	67.85/	67.68/	67.50/	67.32
.E18 :0521:/	67.13/	66.94/	66.75/	66.55
.E19 :0522:/	66.35/	66.14/	65.93/	65.72
.E20 :0523:/	65.51/	65.30/	65.08/	64.86
.E21 :0524:/	64.65/	64.44/	64.22/	64.02
.E22 :0525:/	63.81/	63.61/	63.41/	63.22
.E23 :0526:/	63.02/	62.83/	62.65/	62.47
.E24 :0527:/	62.29/	62.11/	61.94/	61.77
.E25 :0528:/	61.61/	61.45/	61.29/	61.14
.E26 :0529:/	61.00/	60.86/	60.72/	60.58
.E27 :0530:/	60.45			

:
:NEBRASKA CITY NE - MISSOURI RIVER HSA - OAX
:FLOOD STAGE 18.0 FCST ISSUANCE STAGE 16.0

:
:LATEST STAGE 19.3 FT AT 1400Z ON 0504
: FALL BELOW FLOOD STAGE ON 05/11/2011 AROUND 4Z
.ER NEBN1 20110504 Z DC201105041420/DH18/HGIFF/ DIH6
:QPF FCST 12Z 18Z 0Z 6Z
.E1 :0504: / 19.3/ 19.3/ 19.3
.E2 :0505:/ 19.2/ 19.1/ 19.1/ 19.1
.E3 :0506:/ 19.0/ 18.9/ 18.8/ 18.7
.E4 :0507:/ 18.7/ 18.6/ 18.5/ 18.4
.E5 :0508:/ 18.4/ 18.4/ 18.3/ 18.2
.E6 :0509:/ 18.3/ 18.2/ 18.2/ 18.2
.E7 :0510:/ 18.1/ 18.1/ 18.0/ 18.0
.E8 :0511:/ 18.0/ 17.9/ 17.8/ 17.8
.E9 :0512:/ 17.8/ 17.8/ 17.7/ 17.6
.E10 :0513:/ 17.6/ 17.6/ 17.5/ 17.4
.E11 :0514:/ 17.4/ 17.4/ 17.3/ 17.2
.E12 :0515:/ 17.2/ 17.2/ 17.1/ 17.1
.E13 :0516:/ 17.0/ 17.0/ 17.0/ 16.9
.E14 :0517:/ 16.8/ 16.8/ 16.8/ 16.7
.E15 :0518:/ 16.7/ 16.7/ 16.6/ 16.6
.E16 :0519:/ 16.5/ 16.5/ 16.5/ 16.4
.E17 :0520:/ 16.4/ 16.4/ 16.4/ 16.3

.E18 :0521:/	16.3/	16.3/	16.2/	16.2
.E19 :0522:/	16.1/	16.1/	16.1/	16.0
.E20 :0523:/	16.0/	16.0/	15.9/	15.8
.E21 :0524:/	15.8/	15.8/	15.7/	15.7
.E22 :0525:/	15.6/	15.6/	15.6/	15.5
.E23 :0526:/	15.5/	15.5/	15.4/	15.3
.E24 :0527:/	15.3/	15.3/	15.2/	15.2
.E25 :0528:/	15.1/	15.1/	15.1/	15.0
.E26 :0529:/	15.0/	15.0/	14.9/	14.9
.E27 :0530:/	14.8			
.ER NEBN1 20110504 Z DC201105041420/DH18/QRIFF/DIH6				
:QPF FCST	12Z	18Z	0Z	6Z
.E1 :0504:	/	93.30/	93.13/	92.97
.E2 :0505:/	92.47/	91.69/	91.23/	91.15
.E3 :0506:/	90.94/	90.24/	89.35/	88.79
.E4 :0507:/	88.48/	87.93/	87.17/	86.66
.E5 :0508:/	86.44/	86.09/	85.58/	85.35
.E6 :0509:/	85.37/	85.22/	84.89/	84.70
.E7 :0510:/	84.63/	84.31/	83.82/	83.53
.E8 :0511:/	83.41/	83.10/	82.62/	82.36
.E9 :0512:/	82.27/	81.99/	81.53/	81.25
.E10 :0513:/	81.15/	80.86/	80.39/	80.08
.E11 :0514:/	79.96/	79.72/	79.34/	78.94
.E12 :0515:/	78.75/	78.65/	78.32/	77.85
.E13 :0516:/	77.61/	77.52/	77.23/	76.80
.E14 :0517:/	76.59/	76.54/	76.28/	75.89
.E15 :0518:/	75.70/	75.67/	75.44/	75.06
.E16 :0519:/	74.89/	74.88/	74.67/	74.31
.E17 :0520:/	74.15/	74.14/	73.92/	73.55
.E18 :0521:/	73.36/	73.33/	73.10/	72.72
.E19 :0522:/	72.53/	72.49/	72.25/	71.87
.E20 :0523:/	71.67/	71.61/	71.36/	70.97
.E21 :0524:/	70.75/	70.68/	70.43/	70.02
.E22 :0525:/	69.80/	69.73/	69.49/	69.10
.E23 :0526:/	68.88/	68.82/	68.59/	68.22
.E24 :0527:/	68.02/	67.97/	67.75/	67.39
.E25 :0528:/	67.20/	67.16/	66.96/	66.62
.E26 :0529:/	66.44/	66.42/	66.24/	65.92
.E27 :0530:/	65.76			

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:BROWNVILLE NE - MISSOURI RIVER HSA - OAX

:FLOOD STAGE 33.0 FCST ISSUANCE STAGE 31.0

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:LATEST STAGE 35.0 FT AT 1400Z ON 0504

: FALL BELOW FLOOD STAGE ON 05/11/2011 AROUND 0Z

.ER BRON1 20110504 Z DC201105041420/DH18/HGIFF/DIH6

:QPF FCST	12Z	18Z	0Z	6Z
.E1 :0504:	/	34.9/	34.8/	34.8
.E2 :0505:/	34.7/	34.6/	34.5/	34.4
.E3 :0506:/	34.4/	34.3/	34.2/	34.0
.E4 :0507:/	34.0/	33.9/	33.7/	33.6
.E5 :0508:/	33.5/	33.5/	33.4/	33.3
.E6 :0509:/	33.3/	33.2/	33.2/	33.1
.E7 :0510:/	33.1/	33.1/	33.0/	32.9
.E8 :0511:/	32.9/	32.9/	32.8/	32.7
.E9 :0512:/	32.7/	32.7/	32.6/	32.5
.E10 :0513:/	32.5/	32.5/	32.4/	32.3

.E11 :0514:/	32.3/	32.3/	32.2/	32.2
.E12 :0515:/	32.1/	32.1/	32.0/	32.0
.E13 :0516:/	31.9/	31.8/	31.8/	31.8
.E14 :0517:/	31.7/	31.6/	31.6/	31.6
.E15 :0518:/	31.5/	31.4/	31.4/	31.4
.E16 :0519:/	31.3/	31.3/	31.3/	31.2
.E17 :0520:/	31.2/	31.1/	31.1/	31.1
.E18 :0521:/	31.0/	31.0/	30.9/	30.9
.E19 :0522:/	30.8/	30.8/	30.8/	30.7
.E20 :0523:/	30.7/	30.6/	30.6/	30.5
.E21 :0524:/	30.5/	30.4/	30.4/	30.3
.E22 :0525:/	30.3/	30.2/	30.2/	30.2
.E23 :0526:/	30.1/	30.0/	30.0/	30.0
.E24 :0527:/	29.9/	29.8/	29.8/	29.8
.E25 :0528:/	29.7/	29.7/	29.6/	29.6
.E26 :0529:/	29.5/	29.5/	29.5/	29.4
.E27 :0530:/	29.4			

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:RULO NE - MISSOURI RIVER HSA - OAX

:FLOOD STAGE 17.0 FCST ISSUANCE STAGE 15.0

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:LATEST STAGE 18.2 FT AT 1330Z ON 0504

: FALL BELOW FLOOD STAGE ON 05/11/2011 AROUND 10Z

.ER RULN1 20110504 Z DC201105041420/DH18/HGIFF/DIH6

:QPF FCST	12Z	18Z	0Z	6Z
.E1 :0504:	/	18.2/	18.2/	18.1
.E2 :0505:/	18.1/	18.0/	18.0/	17.9
.E3 :0506:/	17.9/	17.8/	17.8/	17.7
.E4 :0507:/	17.6/	17.6/	17.5/	17.5
.E5 :0508:/	17.4/	17.3/	17.3/	17.3
.E6 :0509:/	17.2/	17.2/	17.2/	17.1
.E7 :0510:/	17.1/	17.1/	17.1/	17.0
.E8 :0511:/	17.0/	16.9/	16.9/	16.9
.E9 :0512:/	16.8/	16.8/	16.8/	16.7
.E10 :0513:/	16.7/	16.6/	16.6/	16.6
.E11 :0514:/	16.5/	16.5/	16.4/	16.4
.E12 :0515:/	16.4/	16.3/	16.3/	16.3
.E13 :0516:/	16.2/	16.2/	16.1/	16.1
.E14 :0517:/	16.1/	16.0/	16.0/	16.0
.E15 :0518:/	15.9/	15.9/	15.8/	15.8
.E16 :0519:/	15.8/	15.7/	15.7/	15.7
.E17 :0520:/	15.7/	15.6/	15.6/	15.6
.E18 :0521:/	15.6/	15.5/	15.5/	15.5
.E19 :0522:/	15.4/	15.4/	15.3/	15.3
.E20 :0523:/	15.3/	15.2/	15.2/	15.2
.E21 :0524:/	15.2/	15.1/	15.1/	15.0
.E22 :0525:/	15.0/	15.0/	14.9/	14.9
.E23 :0526:/	14.9/	14.8/	14.8/	14.8
.E24 :0527:/	14.7/	14.7/	14.6/	14.6
.E25 :0528:/	14.6/	14.5/	14.5/	14.5
.E26 :0529:/	14.5/	14.4/	14.4/	14.4
.E27 :0530:/	14.4			

.ER RULN1 20110504 Z DC201105041420/DH18/QRIFF/DIH6

:QPF FCST	12Z	18Z	0Z	6Z
.E1 :0504:	/	97.54/	97.08/	96.65
.E2 :0505:/	96.37/	96.10/	95.56/	94.87
.E3 :0506:/	94.39/	94.18/	93.89/	93.25

.E4 :0507:/	92.44/	91.85/	91.44/	90.91
.E5 :0508:/	90.25/	89.74/	89.44/	89.10
.E6 :0509:/	88.69/	88.42/	88.34/	88.17
.E7 :0510:/	87.90/	87.68/	87.52/	87.21
.E8 :0511:/	86.78/	86.46/	86.25/	85.93
.E9 :0512:/	85.52/	85.22/	85.05/	84.76
.E10 :0513:/	84.36/	84.07/	83.91/	83.66
.E11 :0514:/	83.25/	82.90/	82.69/	82.46
.E12 :0515:/	82.12/	81.73/	81.46/	81.30
.E13 :0516:/	81.02/	80.61/	80.30/	80.12
.E14 :0517:/	79.87/	79.50/	79.22/	79.08
.E15 :0518:/	78.87/	78.53/	78.28/	78.16
.E16 :0519:/	77.97/	77.65/	77.42/	77.32
.E17 :0520:/	77.16/	76.85/	76.63/	76.54
.E18 :0521:/	76.37/	76.06/	75.81/	75.70
.E19 :0522:/	75.52/	75.20/	74.95/	74.83
.E20 :0523:/	74.63/	74.31/	74.05/	73.92
.E21 :0524:/	73.71/	73.38/	73.11/	72.96
.E22 :0525:/	72.75/	72.40/	72.13/	71.98
.E23 :0526:/	71.77/	71.44/	71.18/	71.04
.E24 :0527:/	70.84/	70.53/	70.28/	70.15
.E25 :0528:/	69.97/	69.67/	69.43/	69.31
.E26 :0529:/	69.15/	68.86/	68.64/	68.54
.E27 :0530:/	68.40			

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:ST JOSEPH MO - MISSOURI RIVER HSA - EAX
:FLOOD STAGE 17.0 FCST ISSUANCE STAGE 13.5

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:LATEST STAGE 17.5 FT AT 1330Z ON 0504
: FALL BELOW FLOOD STAGE ON 05/07/2011 AROUND 3Z
.ER SJSJ7 20110504 Z DC201105041420/DH18/HGIF/DIH6

:QPF FCST	12Z	18Z	0Z	6Z
.E1 :0504:	/	17.6/	17.5/	17.4
.E2 :0505:/	17.4/	17.3/	17.3/	17.2
.E3 :0506:/	17.1/	17.1/	17.0/	17.0
.E4 :0507:/	16.9/	16.8/	16.7/	16.6
.E5 :0508:/	16.6/	16.5/	16.4/	16.4
.E6 :0509:/	16.3/	16.3/	16.2/	16.2
.E7 :0510:/	16.2/	16.1/	16.1/	16.1
.E8 :0511:/	16.0/	16.0/	15.9/	15.9
.E9 :0512:/	15.8/	15.8/	15.7/	15.7
.E10 :0513:/	15.6/	15.6/	15.5/	15.5
.E11 :0514:/	15.5/	15.4/	15.3/	15.3
.E12 :0515:/	15.3/	15.2/	15.2/	15.1
.E13 :0516:/	15.1/	15.0/	15.0/	14.9
.E14 :0517:/	14.9/	14.9/	14.8/	14.8
.E15 :0518:/	14.7/	14.7/	14.7/	14.6
.E16 :0519:/	14.6/	14.6/	14.5/	14.5
.E17 :0520:/	14.5/	14.4/	14.4/	14.4
.E18 :0521:/	14.3/	14.3/	14.3/	14.2
.E19 :0522:/	14.2/	14.2/	14.1/	14.1
.E20 :0523:/	14.1/	14.0/	14.0/	14.0
.E21 :0524:/	13.9/	13.9/	13.9/	13.8
.E22 :0525:/	13.8/	13.7/	13.7/	13.7
.E23 :0526:/	13.6/	13.6/	13.5/	13.5
.E24 :0527:/	13.5/	13.4/	13.4/	13.4
.E25 :0528:/	13.3/	13.3/	13.3/	13.2

.E26 :0529:/	13.2/	13.2/	13.1/	13.1
.E27 :0530:/	13.1			
.ER SJSJ7 20110504 Z DC201105041420/DH18/QRIF/DIRH6				
:QPF FCST	12Z	18Z	0Z	6Z
.E1 :0504:	/	99.48/	98.97/	98.50
.E2 :0505:/	98.04/	97.66/	97.37/	96.99
.E3 :0506:/	96.38/	95.76/	95.38/	95.14
.E4 :0507:/	94.71/	93.99/	93.27/	92.74
.E5 :0508:/	92.28/	91.70/	91.09/	90.67
.E6 :0509:/	90.35/	89.97/	89.61/	89.40
.E7 :0510:/	89.28/	89.07/	88.81/	88.61
.E8 :0511:/	88.38/	88.01/	87.62/	87.33
.E9 :0512:/	87.08/	86.72/	86.34/	86.09
.E10 :0513:/	85.86/	85.53/	85.16/	84.91
.E11 :0514:/	84.71/	84.40/	84.01/	83.70
.E12 :0515:/	83.48/	83.20/	82.83/	82.49
.E13 :0516:/	82.26/	82.04/	81.70/	81.33
.E14 :0517:/	81.06/	80.85/	80.55/	80.21
.E15 :0518:/	79.98/	79.81/	79.54/	79.23
.E16 :0519:/	79.03/	78.88/	78.63/	78.34
.E17 :0520:/	78.16/	78.03/	77.81/	77.53
.E18 :0521:/	77.36/	77.23/	77.00/	76.71
.E19 :0522:/	76.51/	76.37/	76.13/	75.83
.E20 :0523:/	75.63/	75.47/	75.22/	74.92
.E21 :0524:/	74.71/	74.54/	74.28/	73.97
.E22 :0525:/	73.74/	73.57/	73.30/	72.98
.E23 :0526:/	72.75/	72.58/	72.31/	72.01
.E24 :0527:/	71.79/	71.63/	71.38/	71.08
.E25 :0528:/	70.88/	70.73/	70.49/	70.21
.E26 :0529:/	70.02/	69.88/	69.67/	69.40
.E27 :0530:/	69.23			

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:ATCHISON KS NO.1 - MISSOURI RIVER HSA - EAX
:FLOOD STAGE 22.0 FCST ISSUANCE STAGE 20.0

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:LATEST ESTIMATED STAGE 20.5 FT AT 1200Z ON 0504 .AR ATCK1 20110504 DH1200/HGIPX 20.50E

.ER ATCK1	20110504 Z DC201105041420/DH18/HGIF/DIRH6
:QPF FCST	12Z 18Z 0Z 6Z
.E1 :0504:	/ 20.5/ 20.4/ 20.4
.E2 :0505:/	20.3/ 20.2/ 20.2/ 20.1
.E3 :0506:/	20.1/ 20.0/ 19.9/ 19.9
.E4 :0507:/	19.8/ 19.7/ 19.6/ 19.5
.E5 :0508:/	19.5/ 19.4/ 19.3/ 19.2
.E6 :0509:/	19.2/ 19.1/ 19.1/ 19.0
.E7 :0510:/	19.0/ 19.0/ 18.9/ 18.9
.E8 :0511:/	18.9/ 18.8/ 18.8/ 18.7
.E9 :0512:/	18.6/ 18.6/ 18.5/ 18.5
.E10 :0513:/	18.4/ 18.4/ 18.3/ 18.3
.E11 :0514:/	18.2/ 18.2/ 18.2/ 18.1
.E12 :0515:/	18.0/ 18.0/ 17.9/ 17.9
.E13 :0516:/	17.8/ 17.8/ 17.7/ 17.6
.E14 :0517:/	17.6/ 17.5/ 17.5/ 17.4
.E15 :0518:/	17.4/ 17.3/ 17.3/ 17.2
.E16 :0519:/	17.2/ 17.1/ 17.1/ 17.0
.E17 :0520:/	17.0/ 16.9/ 16.9/ 16.9
.E18 :0521:/	16.8/ 16.8/ 16.8/ 16.7
.E19 :0522:/	16.7/ 16.6/ 16.6/ 16.6

.E20 :0523:/	16.5/	16.5/	16.5/	16.4
.E21 :0524:/	16.4/	16.3/	16.3/	16.2
.E22 :0525:/	16.2/	16.1/	16.1/	16.1
.E23 :0526:/	16.0/	16.0/	15.9/	15.9
.E24 :0527:/	15.8/	15.8/	15.8/	15.7
.E25 :0528:/	15.7/	15.6/	15.6/	15.5
.E26 :0529:/	15.5/	15.5/	15.4/	15.4
.E27 :0530:/	15.4			

:
:KANSAS CITY MO - MISSOURI RIVER HSA - EAX
:FLOOD STAGE 32.0 FCST ISSUANCE STAGE 30.0
:

:LATEST STAGE 19.0 FT AT 1330Z ON 0504

.ER KCDM7 20110504 Z DC201105041420/DH18/HGIFF/DIH6

:QPF FCST	12Z	18Z	0Z	6Z
.E1 :0504:/	/	18.9/	18.8/	18.8
.E2 :0505:/	18.8/	18.7/	18.6/	18.6
.E3 :0506:/	18.5/	18.4/	18.3/	18.3
.E4 :0507:/	18.2/	18.1/	18.1/	18.0
.E5 :0508:/	17.9/	17.8/	17.8/	17.7
.E6 :0509:/	17.6/	17.6/	17.5/	17.5
.E7 :0510:/	17.4/	17.4/	17.4/	17.4
.E8 :0511:/	17.3/	17.3/	17.3/	17.2
.E9 :0512:/	17.2/	17.1/	17.1/	17.0
.E10 :0513:/	17.0/	17.0/	16.9/	16.9
.E11 :0514:/	16.8/	16.8/	16.7/	16.7
.E12 :0515:/	16.7/	16.6/	16.6/	16.5
.E13 :0516:/	16.5/	16.4/	16.4/	16.4
.E14 :0517:/	16.3/	16.3/	16.2/	16.2
.E15 :0518:/	16.2/	16.1/	16.1/	16.0
.E16 :0519:/	16.0/	16.0/	15.9/	15.9
.E17 :0520:/	15.9/	15.8/	15.8/	15.8
.E18 :0521:/	15.7/	15.7/	15.7/	15.6
.E19 :0522:/	15.6/	15.6/	15.5/	15.5
.E20 :0523:/	15.5/	15.5/	15.4/	15.4
.E21 :0524:/	15.4/	15.3/	15.3/	15.2
.E22 :0525:/	15.2/	15.2/	15.1/	15.1
.E23 :0526:/	15.1/	15.0/	15.0/	14.9
.E24 :0527:/	14.9/	14.9/	14.8/	14.8
.E25 :0528:/	14.8/	14.7/	14.7/	14.6
.E26 :0529:/	14.6/	14.6/	14.5/	14.5
.E27 :0530:/	14.5			

.ER KCDM7 20110504 Z DC201105041420/DH18/QRIFF/DIH6

:QPF FCST	12Z	18Z	0Z	6Z
.E1 :0504:/	/	101.81/	101.60/	101.38
.E2 :0505:/	100.94/	100.31/	99.76/	99.20
.E3 :0506:/	98.68/	98.16/	97.56/	96.92
.E4 :0507:/	96.34/	95.86/	95.40/	94.84
.E5 :0508:/	94.18/	93.56/	93.01/	92.48
.E6 :0509:/	91.97/	91.51/	91.14/	90.82
.E7 :0510:/	90.51/	90.26/	90.07/	89.88
.E8 :0511:/	89.67/	89.45/	89.21/	88.91
.E9 :0512:/	88.57/	88.22/	87.90/	87.57
.E10 :0513:/	87.23/	86.90/	86.60/	86.30
.E11 :0514:/	85.98/	85.67/	85.40/	85.11
.E12 :0515:/	84.79/	84.47/	84.17/	83.88
.E13 :0516:/	83.57/	83.24/	82.94/	82.66

.E14 :0517:/	82.37/	82.05/	81.74/	81.45
.E15 :0518:/	81.17/	80.87/	80.59/	80.34
.E16 :0519:/	80.10/	79.83/	79.58/	79.36
.E17 :0520:/	79.14/	78.90/	78.67/	78.47
.E18 :0521:/	78.27/	78.04/	77.82/	77.63
.E19 :0522:/	77.43/	77.20/	76.97/	76.76
.E20 :0523:/	76.55/	76.30/	76.06/	75.85
.E21 :0524:/	75.63/	75.38/	75.13/	74.90
.E22 :0525:/	74.67/	74.41/	74.15/	73.91
.E23 :0526:/	73.67/	73.40/	73.14/	72.90
.E24 :0527:/	72.66/	72.40/	72.15/	71.92
.E25 :0528:/	71.69/	71.45/	71.20/	70.99
.E26 :0529:/	70.78/	70.54/	70.32/	70.12
.E27 :0530:/	69.92			

:

:NAPOLEON MO - MISSOURI RIVER HSA - EAX
:FLOOD STAGE 17.0 FCST ISSUANCE STAGE 15.0

:

:LATEST STAGE 15.5 FT AT 1330Z ON 0504

.ER NAPM7 20110504 Z DC201105041420/DH18/HGIF/6

:QPF FCST	12Z	18Z	0Z	6Z
.E1 :0504:/	/	15.5/	15.4/	15.4
.E2 :0505:/	15.4/	15.4/	15.3/	15.3
.E3 :0506:/	15.3/	15.2/	15.2/	15.1
.E4 :0507:/	15.0/	14.9/	14.9/	14.8
.E5 :0508:/	14.8/	14.7/	14.6/	14.5
.E6 :0509:/	14.5/	14.4/	14.4/	14.3
.E7 :0510:/	14.3/	14.3/	14.2/	14.2
.E8 :0511:/	14.2/	14.1/	14.1/	14.1
.E9 :0512:/	14.1/	14.0/	14.0/	13.9
.E10 :0513:/	13.9/	13.8/	13.8/	13.7
.E11 :0514:/	13.7/	13.7/	13.6/	13.6
.E12 :0515:/	13.5/	13.5/	13.5/	13.4
.E13 :0516:/	13.4/	13.3/	13.3/	13.2
.E14 :0517:/	13.2/	13.2/	13.1/	13.1
.E15 :0518:/	13.0/	13.0/	13.0/	12.9
.E16 :0519:/	12.9/	12.9/	12.8/	12.8
.E17 :0520:/	12.8/	12.7/	12.7/	12.7
.E18 :0521:/	12.6/	12.6/	12.6/	12.5
.E19 :0522:/	12.5/	12.5/	12.5/	12.4
.E20 :0523:/	12.4/	12.4/	12.3/	12.3
.E21 :0524:/	12.3/	12.2/	12.2/	12.2
.E22 :0525:/	12.1/	12.1/	12.1/	12.0
.E23 :0526:/	12.0/	12.0/	11.9/	11.9
.E24 :0527:/	11.9/	11.8/	11.8/	11.8
.E25 :0528:/	11.7/	11.7/	11.7/	11.6
.E26 :0529:/	11.6/	11.6/	11.5/	11.5
.E27 :0530:/	11.5			

:

:WAVERLY MO - MISSOURI RIVER HSA - EAX
:FLOOD STAGE 20.0 FCST ISSUANCE STAGE 18.0

:

:LATEST STAGE 18.4 FT AT 1330Z ON 0504

.ER WVYM7 20110504 Z DC201105041420/DH18/HGIF/6

:QPF FCST	12Z	18Z	0Z	6Z
.E1 :0504:/	/	18.3/	18.3/	18.3
.E2 :0505:/	18.3/	18.3/	18.3/	18.2

.E3 :0506:/	18.2/	18.2/	18.1/	18.1
.E4 :0507:/	18.0/	18.0/	17.9/	17.9
.E5 :0508:/	17.8/	17.7/	17.7/	17.6
.E6 :0509:/	17.6/	17.5/	17.4/	17.4
.E7 :0510:/	17.4/	17.3/	17.3/	17.3
.E8 :0511:/	17.2/	17.2/	17.2/	17.2
.E9 :0512:/	17.1/	17.1/	17.1/	17.0
.E10 :0513:/	17.0/	17.0/	16.9/	16.9
.E11 :0514:/	16.9/	16.8/	16.8/	16.7
.E12 :0515:/	16.7/	16.7/	16.6/	16.6
.E13 :0516:/	16.6/	16.5/	16.5/	16.5
.E14 :0517:/	16.4/	16.4/	16.4/	16.3
.E15 :0518:/	16.3/	16.3/	16.2/	16.2
.E16 :0519:/	16.2/	16.1/	16.1/	16.1
.E17 :0520:/	16.0/	16.0/	16.0/	16.0
.E18 :0521:/	15.9/	15.9/	15.9/	15.9
.E19 :0522:/	15.8/	15.8/	15.8/	15.8
.E20 :0523:/	15.7/	15.7/	15.7/	15.6
.E21 :0524:/	15.6/	15.6/	15.6/	15.5
.E22 :0525:/	15.5/	15.5/	15.4/	15.4
.E23 :0526:/	15.4/	15.3/	15.3/	15.3
.E24 :0527:/	15.3/	15.2/	15.2/	15.2
.E25 :0528:/	15.1/	15.1/	15.1/	15.0
.E26 :0529:/	15.0/	15.0/	15.0/	14.9
.E27 :0530:/	14.9			
.ER WVYM7	20110504	Z	DC201105041420/DH18/QRIF/	DIH6
:QPF FCST	12Z	18Z	0Z	6Z
.E1 :0504:/	/	101.16/	101.20/	101.21
.E2 :0505:/	101.14/	101.00/	100.75/	100.43
.E3 :0506:/	100.06/	99.69/	99.32/	98.91
.E4 :0507:/	98.40/	97.84/	97.27/	96.73
.E5 :0508:/	96.20/	95.63/	95.03/	94.43
.E6 :0509:/	93.85/	93.30/	92.79/	92.33
.E7 :0510:/	91.92/	91.57/	91.26/	90.99
.E8 :0511:/	90.76/	90.55/	90.33/	90.10
.E9 :0512:/	89.85/	89.56/	89.24/	88.91
.E10 :0513:/	88.57/	88.24/	87.90/	87.57
.E11 :0514:/	87.26/	86.94/	86.63/	86.32
.E12 :0515:/	86.02/	85.72/	85.41/	85.10
.E13 :0516:/	84.79/	84.49/	84.17/	83.86
.E14 :0517:/	83.55/	83.26/	82.95/	82.64
.E15 :0518:/	82.34/	82.04/	81.74/	81.45
.E16 :0519:/	81.18/	80.91/	80.65/	80.39
.E17 :0520:/	80.15/	79.91/	79.67/	79.44
.E18 :0521:/	79.21/	79.00/	78.78/	78.56
.E19 :0522:/	78.35/	78.14/	77.93/	77.71
.E20 :0523:/	77.49/	77.26/	77.04/	76.80
.E21 :0524:/	76.57/	76.34/	76.11/	75.87
.E22 :0525:/	75.63/	75.39/	75.14/	74.89
.E23 :0526:/	74.64/	74.39/	74.14/	73.88
.E24 :0527:/	73.62/	73.37/	73.12/	72.87
.E25 :0528:/	72.62/	72.38/	72.14/	71.90
.E26 :0529:/	71.66/	71.44/	71.21/	70.98
.E27 :0530:/	70.76			
:				
:MIAMI MO - MISSOURI RIVER		HSA - EAX		
:FLOOD STAGE 18.0		FCST ISSUANCE STAGE 16.0		

:
:LATEST ESTIMATED STAGE 16.4 FT AT 1200Z ON 0504 .AR MIAM7 20110504 DH1200/HGIPX 16.40E

.ER MIAM7 20110504 Z DC201105041420/DH18/HGIFF/DIH6

:QPF FCST	12Z	18Z	0Z	6Z
.E1 :0504:	/	16.4/	16.4/	16.4
.E2 :0505:/	16.4/	16.4/	16.4/	16.3
.E3 :0506:/	16.3/	16.2/	16.2/	16.1
.E4 :0507:/	16.1/	16.0/	16.0/	15.9
.E5 :0508:/	15.8/	15.8/	15.7/	15.6
.E6 :0509:/	15.5/	15.5/	15.4/	15.3
.E7 :0510:/	15.3/	15.2/	15.2/	15.1
.E8 :0511:/	15.1/	15.1/	15.1/	15.0
.E9 :0512:/	15.0/	15.0/	14.9/	14.9
.E10 :0513:/	14.8/	14.8/	14.7/	14.7
.E11 :0514:/	14.6/	14.6/	14.5/	14.5
.E12 :0515:/	14.4/	14.4/	14.3/	14.3
.E13 :0516:/	14.2/	14.2/	14.1/	14.1
.E14 :0517:/	14.1/	14.0/	14.0/	13.9
.E15 :0518:/	13.9/	13.8/	13.8/	13.7
.E16 :0519:/	13.7/	13.6/	13.6/	13.6
.E17 :0520:/	13.5/	13.5/	13.5/	13.4
.E18 :0521:/	13.4/	13.3/	13.3/	13.3
.E19 :0522:/	13.2/	13.2/	13.2/	13.1
.E20 :0523:/	13.1/	13.0/	13.0/	13.0
.E21 :0524:/	12.9/	12.9/	12.9/	12.8
.E22 :0525:/	12.8/	12.7/	12.7/	12.7
.E23 :0526:/	12.6/	12.6/	12.5/	12.5
.E24 :0527:/	12.4/	12.4/	12.4/	12.3
.E25 :0528:/	12.3/	12.2/	12.2/	12.2
.E26 :0529:/	12.1/	12.1/	12.0/	12.0
.E27 :0530:/	12.0			

:
:GLASGOW MO - MISSOURI RIVER HSA - EAX
:FLOOD STAGE 25.0 FCST ISSUANCE STAGE 23.0

:
:LATEST STAGE 19.5 FT AT 1330Z ON 0504
.ER GLZM7 20110504 Z DC201105041420/DH18/HGIFF/DIH6

:QPF FCST	12Z	18Z	0Z	6Z
.E1 :0504:	/	19.5/	19.5/	19.5
.E2 :0505:/	19.4/	19.4/	19.4/	19.4
.E3 :0506:/	19.4/	19.4/	19.3/	19.3
.E4 :0507:/	19.2/	19.2/	19.1/	19.1
.E5 :0508:/	19.0/	18.9/	18.8/	18.8
.E6 :0509:/	18.7/	18.6/	18.5/	18.4
.E7 :0510:/	18.4/	18.3/	18.2/	18.2
.E8 :0511:/	18.1/	18.1/	18.0/	18.0
.E9 :0512:/	18.0/	17.9/	17.9/	17.8
.E10 :0513:/	17.8/	17.7/	17.7/	17.6
.E11 :0514:/	17.6/	17.5/	17.5/	17.4
.E12 :0515:/	17.4/	17.3/	17.3/	17.2
.E13 :0516:/	17.2/	17.2/	17.1/	17.1
.E14 :0517:/	17.0/	17.0/	16.9/	16.9
.E15 :0518:/	16.8/	16.8/	16.7/	16.7
.E16 :0519:/	16.7/	16.6/	16.6/	16.5
.E17 :0520:/	16.5/	16.4/	16.4/	16.4
.E18 :0521:/	16.3/	16.3/	16.3/	16.2
.E19 :0522:/	16.2/	16.2/	16.1/	16.1

.E20 :0523:/	16.1/	16.0/	16.0/	15.9
.E21 :0524:/	15.9/	15.9/	15.8/	15.8
.E22 :0525:/	15.8/	15.7/	15.7/	15.6
.E23 :0526:/	15.6/	15.6/	15.5/	15.5
.E24 :0527:/	15.4/	15.4/	15.4/	15.3
.E25 :0528:/	15.3/	15.2/	15.2/	15.2
.E26 :0529:/	15.1/	15.1/	15.0/	15.0
.E27 :0530:/	15.0			

:
:BOONVILLE MO - MISSOURI RIVER HSA - EAX
:FLOOD STAGE 21.0 FCST ISSUANCE STAGE 19.0
:

:LATEST STAGE 16.0 FT AT 1330Z ON 0504

.ER BOZM7 20110504 Z DC201105041420/DH18/HGIF/DIH6

:QPF FCST	12Z	18Z	0Z	6Z
.E1 :0504:	/	16.0/	15.9/	15.9
.E2 :0505:/	15.9/	15.9/	15.9/	15.9
.E3 :0506:/	15.8/	15.8/	15.8/	15.8
.E4 :0507:/	15.8/	15.7/	15.7/	15.7
.E5 :0508:/	15.6/	15.6/	15.5/	15.5
.E6 :0509:/	15.4/	15.3/	15.3/	15.2
.E7 :0510:/	15.2/	15.1/	15.1/	15.0
.E8 :0511:/	15.0/	14.9/	14.9/	14.8
.E9 :0512:/	14.8/	14.8/	14.7/	14.7
.E10 :0513:/	14.7/	14.6/	14.6/	14.5
.E11 :0514:/	14.5/	14.4/	14.4/	14.4
.E12 :0515:/	14.3/	14.3/	14.2/	14.2
.E13 :0516:/	14.2/	14.1/	14.1/	14.1
.E14 :0517:/	14.0/	14.0/	13.9/	13.9
.E15 :0518:/	13.9/	13.8/	13.8/	13.8
.E16 :0519:/	13.7/	13.7/	13.6/	13.6
.E17 :0520:/	13.6/	13.5/	13.5/	13.5
.E18 :0521:/	13.4/	13.4/	13.4/	13.3
.E19 :0522:/	13.3/	13.3/	13.3/	13.2
.E20 :0523:/	13.2/	13.2/	13.1/	13.1
.E21 :0524:/	13.1/	13.1/	13.0/	13.0
.E22 :0525:/	13.0/	12.9/	12.9/	12.9
.E23 :0526:/	12.8/	12.8/	12.8/	12.7
.E24 :0527:/	12.7/	12.7/	12.6/	12.6
.E25 :0528:/	12.6/	12.5/	12.5/	12.5
.E26 :0529:/	12.4/	12.4/	12.4/	12.3
.E27 :0530:/	12.3			

.ER BOZM7 20110504 Z DC201105041420/DH18/QRIF/DIH6

:QPF FCST	12Z	18Z	0Z	6Z
.E1 :0504:	/	109.58/	109.22/	108.88
.E2 :0505:/	108.64/	108.53/	108.49/	108.46
.E3 :0506:/	108.40/	108.29/	108.12/	107.88
.E4 :0507:/	107.54/	107.16/	106.76/	106.34
.E5 :0508:/	105.86/	105.33/	104.79/	104.25
.E6 :0509:/	103.71/	103.11/	102.50/	101.86
.E7 :0510:/	101.24/	100.64/	100.07/	99.54
.E8 :0511:/	99.06/	98.63/	98.24/	97.88
.E9 :0512:/	97.57/	97.27/	96.99/	96.69
.E10 :0513:/	96.36/	96.00/	95.61/	95.20
.E11 :0514:/	94.78/	94.37/	93.96/	93.56
.E12 :0515:/	93.18/	92.82/	92.46/	92.11
.E13 :0516:/	91.78/	91.44/	91.10/	90.75

.E14 :0517:/	90.41/	90.07/	89.73/	89.39
.E15 :0518:/	89.05/	88.71/	88.38/	88.05
.E16 :0519:/	87.71/	87.38/	87.06/	86.74
.E17 :0520:/	86.43/	86.13/	85.84/	85.55
.E18 :0521:/	85.28/	85.01/	84.74/	84.48
.E19 :0522:/	84.23/	83.98/	83.74/	83.50
.E20 :0523:/	83.26/	83.03/	82.79/	82.55
.E21 :0524:/	82.30/	82.06/	81.81/	81.56
.E22 :0525:/	81.31/	81.05/	80.80/	80.54
.E23 :0526:/	80.28/	80.02/	79.76/	79.49
.E24 :0527:/	79.22/	78.95/	78.68/	78.40
.E25 :0528:/	78.13/	77.86/	77.59/	77.32
.E26 :0529:/	77.05/	76.79/	76.53/	76.28
.E27 :0530:/	76.02			

:
:JEFFERSON CITY MO - MISSOURI RIVER HSA - LSX
:FLOOD STAGE 23.0 FCST ISSUANCE STAGE 21.0
:

:LATEST STAGE 15.4 FT AT 1400Z ON 0504

.ER JFFM7 20110504 Z DC201105041420/DH18/HGIFF/DIH6

:QPF FCST	12Z	18Z	0Z	6Z
.E1 :0504:	/	15.4/	15.4/	15.3
.E2 :0505:/	15.3/	15.3/	15.2/	15.2
.E3 :0506:/	15.2/	15.2/	15.2/	15.2
.E4 :0507:/	15.2/	15.2/	15.2/	15.1
.E5 :0508:/	15.1/	15.1/	15.0/	15.0
.E6 :0509:/	14.9/	14.9/	14.8/	14.7
.E7 :0510:/	14.7/	14.6/	14.5/	14.5
.E8 :0511:/	14.4/	14.3/	14.3/	14.2
.E9 :0512:/	14.2/	14.2/	14.1/	14.1
.E10 :0513:/	14.0/	14.0/	14.0/	13.9
.E11 :0514:/	13.9/	13.8/	13.8/	13.7
.E12 :0515:/	13.7/	13.6/	13.6/	13.6
.E13 :0516:/	13.5/	13.5/	13.4/	13.4
.E14 :0517:/	13.3/	13.3/	13.3/	13.2
.E15 :0518:/	13.2/	13.1/	13.1/	13.1
.E16 :0519:/	13.0/	13.0/	12.9/	12.9
.E17 :0520:/	12.9/	12.8/	12.8/	12.7
.E18 :0521:/	12.7/	12.7/	12.6/	12.6
.E19 :0522:/	12.6/	12.5/	12.5/	12.5
.E20 :0523:/	12.5/	12.4/	12.4/	12.4
.E21 :0524:/	12.3/	12.3/	12.3/	12.3
.E22 :0525:/	12.2/	12.2/	12.2/	12.1
.E23 :0526:/	12.1/	12.1/	12.0/	12.0
.E24 :0527:/	12.0/	11.9/	11.9/	11.9
.E25 :0528:/	11.8/	11.8/	11.7/	11.7
.E26 :0529:/	11.7/	11.6/	11.6/	11.6
.E27 :0530:/	11.5			

:
:CHAMOI MO - MISSOURI RIVER HSA - LSX
:FLOOD STAGE 17.0 FCST ISSUANCE STAGE 15.0
:

:LATEST STAGE 11.2 FT AT 1200Z ON 0504

.ER CMSM7 20110504 Z DC201105041420/DH18/HGIFF/DIH6

:QPF FCST	12Z	18Z	0Z	6Z
.E1 :0504:	/	11.2/	11.1/	11.0
.E2 :0505:/	10.9/	10.8/	10.7/	10.6

.E3 :0506:/	10.6/	10.5/	10.5/	10.4
.E4 :0507:/	10.4/	10.3/	10.3/	10.4
.E5 :0508:/	10.8/	11.5/	11.7/	11.7
.E6 :0509:/	11.6/	11.6/	11.5/	11.5
.E7 :0510:/	11.4/	11.4/	11.3/	11.2
.E8 :0511:/	11.1/	11.1/	11.0/	11.0
.E9 :0512:/	10.9/	10.9/	10.8/	10.8
.E10 :0513:/	10.7/	10.7/	10.7/	10.6
.E11 :0514:/	10.6/	10.5/	10.5/	10.4
.E12 :0515:/	10.4/	10.4/	10.3/	10.3
.E13 :0516:/	10.2/	10.2/	10.1/	10.1
.E14 :0517:/	10.1/	10.0/	10.0/	9.9
.E15 :0518:/	9.9/	9.9/	9.8/	9.8
.E16 :0519:/	9.7/	9.7/	9.7/	9.6
.E17 :0520:/	9.6/	9.6/	9.5/	9.5
.E18 :0521:/	9.4/	9.4/	9.4/	9.3
.E19 :0522:/	9.3/	9.3/	9.2/	9.2
.E20 :0523:/	9.2/	9.1/	9.1/	9.1
.E21 :0524:/	9.1/	9.0/	9.0/	9.0
.E22 :0525:/	8.9/	8.9/	8.9/	8.9
.E23 :0526:/	8.8/	8.8/	8.8/	8.7
.E24 :0527:/	8.7/	8.7/	8.6/	8.6
.E25 :0528:/	8.6/	8.5/	8.5/	8.5
.E26 :0529:/	8.4/	8.4/	8.4/	8.4
.E27 :0530:/	8.3			

:

:GASCONADE MO - MISSOURI RIVER HSA - LSX
:FLOOD STAGE 22.0 FCST ISSUANCE STAGE 20.0

:

:LATEST ESTIMATED STAGE 18.2 FT AT 1200Z ON 0504 .AR GSCM7 20110504 DH1200/HGIPX 18.20E

.ER GSCM7 20110504 Z DC201105041420/DH18/HGIFF/DIH6

:QPF FCST	12Z	18Z	0Z	6Z
.E1 :0504:	/	18.2/	18.1/	18.0
.E2 :0505:/	17.9/	17.8/	17.7/	17.6
.E3 :0506:/	17.5/	17.5/	17.4/	17.3
.E4 :0507:/	17.3/	17.2/	17.2/	17.2
.E5 :0508:/	17.5/	18.0/	18.5/	18.6
.E6 :0509:/	18.7/	18.7/	18.6/	18.6
.E7 :0510:/	18.5/	18.4/	18.3/	18.3
.E8 :0511:/	18.2/	18.1/	18.0/	18.0
.E9 :0512:/	17.9/	17.8/	17.8/	17.7
.E10 :0513:/	17.7/	17.6/	17.6/	17.6
.E11 :0514:/	17.5/	17.5/	17.4/	17.4
.E12 :0515:/	17.3/	17.2/	17.2/	17.1
.E13 :0516:/	17.1/	17.0/	17.0/	16.9
.E14 :0517:/	16.9/	16.8/	16.8/	16.8
.E15 :0518:/	16.7/	16.7/	16.6/	16.6
.E16 :0519:/	16.5/	16.5/	16.4/	16.4
.E17 :0520:/	16.3/	16.3/	16.2/	16.2
.E18 :0521:/	16.2/	16.1/	16.1/	16.0
.E19 :0522:/	16.0/	16.0/	15.9/	15.9
.E20 :0523:/	15.9/	15.8/	15.8/	15.8
.E21 :0524:/	15.7/	15.7/	15.7/	15.6
.E22 :0525:/	15.6/	15.6/	15.5/	15.5
.E23 :0526:/	15.5/	15.4/	15.4/	15.4
.E24 :0527:/	15.3/	15.3/	15.3/	15.2
.E25 :0528:/	15.2/	15.1/	15.1/	15.1

.E26 :0529:/ 15.0/ 15.0/ 15.0/ 14.9

.E27 :0530:/ 14.9

:

:HERMANN MO - MISSOURI RIVER HSA - LSX

:FLOOD STAGE 21.0 FCST ISSUANCE STAGE 19.0

:

:LATEST STAGE 16.5 FT AT 1330Z ON 0504

.ER HRNM7 20110504 Z DC201105041420/DH18/HGIFF/DIH6

:QPF FCST 12Z 18Z 0Z 6Z

.E1 :0504:/ / 16.4/ 16.4/ 16.4

.E2 :0505:/ 16.3/ 16.2/ 16.1/ 16.0

.E3 :0506:/ 15.8/ 15.6/ 15.4/ 15.3

.E4 :0507:/ 15.1/ 14.9/ 14.8/ 14.8

.E5 :0508:/ 14.9/ 15.2/ 15.5/ 15.6

.E6 :0509:/ 15.5/ 15.5/ 15.4/ 15.4

.E7 :0510:/ 15.3/ 15.2/ 15.1/ 15.0

.E8 :0511:/ 15.0/ 14.9/ 14.8/ 14.8

.E9 :0512:/ 14.7/ 14.7/ 14.6/ 14.6

.E10 :0513:/ 14.5/ 14.5/ 14.5/ 14.4

.E11 :0514:/ 14.4/ 14.4/ 14.3/ 14.3

.E12 :0515:/ 14.2/ 14.2/ 14.2/ 14.1

.E13 :0516:/ 14.1/ 14.0/ 14.0/ 14.0

.E14 :0517:/ 13.9/ 13.9/ 13.8/ 13.8

.E15 :0518:/ 13.7/ 13.7/ 13.6/ 13.6

.E16 :0519:/ 13.6/ 13.5/ 13.5/ 13.4

.E17 :0520:/ 13.4/ 13.3/ 13.3/ 13.3

.E18 :0521:/ 13.2/ 13.2/ 13.2/ 13.1

.E19 :0522:/ 13.1/ 13.0/ 13.0/ 13.0

.E20 :0523:/ 12.9/ 12.9/ 12.9/ 12.9

.E21 :0524:/ 12.8/ 12.8/ 12.8/ 12.7

.E22 :0525:/ 12.7/ 12.7/ 12.6/ 12.6

.E23 :0526:/ 12.6/ 12.5/ 12.5/ 12.5

.E24 :0527:/ 12.5/ 12.4/ 12.4/ 12.4

.E25 :0528:/ 12.3/ 12.3/ 12.3/ 12.2

.E26 :0529:/ 12.2/ 12.2/ 12.1/ 12.1

.E27 :0530:/ 12.1

.ER HRNM7 20110504 Z DC201105041420/DH18/QRIF/DIH6

:QPF FCST 12Z 18Z 0Z 6Z

.E1 :0504:/ / 141.65/ 142.26/ 141.95

.E2 :0505:/ 140.82/ 139.69/ 138.56/ 136.93

.E3 :0506:/ 135.00/ 133.04/ 131.19/ 129.50

.E4 :0507:/ 127.91/ 126.37/ 124.96/ 124.31

.E5 :0508:/ 125.97/ 129.48/ 132.08/ 132.81

.E6 :0509:/ 132.46/ 132.04/ 131.42/ 130.69

.E7 :0510:/ 129.89/ 129.08/ 128.29/ 127.49

.E8 :0511:/ 126.72/ 125.98/ 125.27/ 124.60

.E9 :0512:/ 123.99/ 123.42/ 122.90/ 122.43

.E10 :0513:/ 122.00/ 121.59/ 121.20/ 120.80

.E11 :0514:/ 120.40/ 119.98/ 119.54/ 119.08

.E12 :0515:/ 118.62/ 118.16/ 117.70/ 117.25

.E13 :0516:/ 116.81/ 116.38/ 115.96/ 115.55

.E14 :0517:/ 115.16/ 114.76/ 114.37/ 113.98

.E15 :0518:/ 113.59/ 113.19/ 112.79/ 112.39

.E16 :0519:/ 112.00/ 111.62/ 111.24/ 110.86

.E17 :0520:/ 110.49/ 110.12/ 109.75/ 109.39

.E18 :0521:/ 109.04/ 108.69/ 108.36/ 108.03

.E19 :0522:/ 107.71/ 107.40/ 107.09/ 106.79

.E20 :0523:/	106.50/	106.21/	105.93/	105.65
.E21 :0524:/	105.37/	105.10/	104.82/	104.55
.E22 :0525:/	104.27/	103.99/	103.71/	103.43
.E23 :0526:/	103.14/	102.86/	102.57/	102.28
.E24 :0527:/	101.99/	101.70/	101.40/	101.11
.E25 :0528:/	100.81/	100.51/	100.21/	99.91
.E26 :0529:/	99.60/	99.30/	99.00/	98.71
.E27 :0530:/	98.41			

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:WASHINGTON MO - MISSOURI RIVER HSA - LSX

:FLOOD STAGE 20.0 FCST ISSUANCE STAGE 18.0

:

:LATEST STAGE 13.1 FT AT 1345Z ON 0504

.ER WHGM7 20110504 Z DC201105041420/DH18/HGIF/DIH6

:QPF FCST	12Z	18Z	0Z	6Z
.E1 :0504:	/	13.0/	12.9/	12.9
.E2 :0505:/	12.9/	12.8/	12.7/	12.7
.E3 :0506:/	12.6/	12.5/	12.3/	12.2
.E4 :0507:/	12.1/	11.9/	11.7/	11.6
.E5 :0508:/	11.5/	11.5/	11.7/	12.0
.E6 :0509:/	12.1/	12.1/	12.2/	12.1
.E7 :0510:/	12.1/	12.1/	12.0/	12.0
.E8 :0511:/	11.9/	11.8/	11.7/	11.7
.E9 :0512:/	11.6/	11.6/	11.5/	11.4
.E10 :0513:/	11.4/	11.4/	11.3/	11.3
.E11 :0514:/	11.2/	11.2/	11.2/	11.1
.E12 :0515:/	11.1/	11.0/	11.0/	10.9
.E13 :0516:/	10.9/	10.8/	10.8/	10.7
.E14 :0517:/	10.7/	10.6/	10.6/	10.6
.E15 :0518:/	10.5/	10.5/	10.4/	10.4
.E16 :0519:/	10.3/	10.3/	10.3/	10.2
.E17 :0520:/	10.2/	10.1/	10.1/	10.1
.E18 :0521:/	10.0/	10.0/	9.9/	9.9
.E19 :0522:/	9.9/	9.8/	9.8/	9.8
.E20 :0523:/	9.7/	9.7/	9.6/	9.6
.E21 :0524:/	9.6/	9.5/	9.5/	9.5
.E22 :0525:/	9.5/	9.4/	9.4/	9.4
.E23 :0526:/	9.3/	9.3/	9.3/	9.2
.E24 :0527:/	9.2/	9.2/	9.1/	9.1
.E25 :0528:/	9.1/	9.0/	9.0/	8.9
.E26 :0529:/	8.9/	8.9/	8.8/	8.8
.E27 :0530:/	8.8			

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:ST CHARLES MO 1E - MISSOURI RIVER HSA - LSX

:FLOOD STAGE 25.0 FCST ISSUANCE STAGE 23.0

:

:LATEST STAGE 20.2 FT AT 1400Z ON 0504

.ER SCLM7 20110504 Z DC201105041420/DH18/HGIF/DIH6

:QPF FCST	12Z	18Z	0Z	6Z
.E1 :0504:	/	20.1/	20.0/	19.8
.E2 :0505:/	19.7/	19.7/	19.6/	19.6
.E3 :0506:/	19.5/	19.5/	19.4/	19.2
.E4 :0507:/	19.1/	19.0/	18.8/	18.7
.E5 :0508:/	18.6/	18.5/	18.4/	18.5
.E6 :0509:/	18.6/	18.7/	18.8/	18.9
.E7 :0510:/	18.9/	18.9/	18.9/	18.8
.E8 :0511:/	18.8/	18.7/	18.7/	18.6

.E9 :0512:/	18.6/	18.5/	18.5/	18.4
.E10 :0513:/	18.4/	18.3/	18.3/	18.3
.E11 :0514:/	18.2/	18.2/	18.2/	18.1
.E12 :0515:/	18.1/	18.1/	18.0/	18.0
.E13 :0516:/	17.9/	17.9/	17.9/	17.8
.E14 :0517:/	17.8/	17.7/	17.7/	17.7
.E15 :0518:/	17.6/	17.6/	17.5/	17.5
.E16 :0519:/	17.5/	17.4/	17.4/	17.4
.E17 :0520:/	17.3/	17.3/	17.3/	17.2
.E18 :0521:/	17.2/	17.2/	17.1/	17.1
.E19 :0522:/	17.1/	17.0/	17.0/	17.0
.E20 :0523:/	16.9/	16.9/	16.9/	16.8
.E21 :0524:/	16.8/	16.8/	16.7/	16.7
.E22 :0525:/	16.7/	16.7/	16.6/	16.6
.E23 :0526:/	16.6/	16.6/	16.5/	16.5
.E24 :0527:/	16.5/	16.4/	16.4/	16.4
.E25 :0528:/	16.4/	16.3/	16.3/	16.3
.E26 :0529:/	16.2/	16.2/	16.2/	16.1
.E27 :0530:/	16.1			

:COMMENT

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:wao

:...END of MESSAGE...

Classification: UNCLASSIFIED

Caveats: NONE

Classification: UNCLASSIFIED

Caveats: NONE

NWO

From: [REDACTED] NWD02
Sent: Wednesday, May 04, 2011 9:04 AM
To: Farhat, Jody S NWD02
Subject: RE: Todd Sando call (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

I talked to him a few minutes ago. I gave him tentative schedule for Garrison increases. We discussed the runoff and monthly studies. He was concerned about the upper basic forecast and encouraged us to go up to 60 kcfs quicker if necessary. We discussed the stages expected in Bismarck, etc. I can fill you in more later.

The schedule I worked out with Garrison this morning was: 29 kcfs tomorrow (full output of 4 units). Then 3 kcfs increase using 8 am tunnel release changes starting Friday. (32 Fri, 35 Sat, 38 Sun, 41 Mon, 44 Tues). Not sure how we'll make the last changes (may want to ease into the last few) but maybe something like 46 Wed, 48 Thurs, and 49 Fri.
Mike

-----Original Message-----

From: Farhat, Jody S NWD02
Sent: Wednesday, May 04, 2011 8:55 AM
To: [REDACTED] NWD02
Subject: Todd Sando call (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

I need to give [REDACTED] a call back. Have you talked to him recently, and what is the schedule to increase Garrison releases up to the 49 kcfs?

Jody Farhat, P.E.
Chief, Missouri River Basin Water Management

jody.s.farhat@usace.army.mil
Office: 402-996-3840
Cell: 402-350-1417
Home: 402-551-6013

Classification: UNCLASSIFIED
Caveats: NONE

Classification: UNCLASSIFIED
Caveats: NONE

[REDACTED] NWO

From: [REDACTED] NWO
Sent: Wednesday, May 04, 2011 9:01 AM
To: Farhat, Jody S NWD02; [REDACTED] NWD02; [REDACTED] NWD02; [REDACTED] NWO; Carol_Aron@fws.gov; Henry_Maddux@fws.gov; [REDACTED] NWK; [REDACTED] NWO; [REDACTED] NWO
Cc: [REDACTED] NWO; [REDACTED] NWO; [REDACTED] NWO
Subject: River Survey May 3, 2011 (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Below is a summary of the survey conducted on May 3, 2011. If you have any questions, please e-mail me or call me at 402-667-2581.

[REDACTED]

On May 3, 2011 the Missouri River below Gavins Point Dam was surveyed from RM 791.5 to RM 777.7. 49 piping plovers and 1 semi-palmated plover were observed. No nests were found, but six plovers were observed sitting in nest bowls indicating that egg laying will begin shortly. 7 plovers were observed at the constructed sandbar complex at RM 791.5. 2 plovers were observed at the natural sandbar at RM 782.5. 27 plovers were observed at the constructed sandbar complex at RM 781.5. 8 plovers were observed at the constructed sandbar complex at RM 781.0. 5 plovers were observed at the constructed sandbar at RM 777.7. All sandbars were greatly reduced in size compared to 2009 and 2010. The historic plover nesting sandbars at RM 790.9, 789.6 and 788.5 were inundated. The two geotube structures at RM 789.6 were inundated. Flows on the Missouri were estimated at 63,000 cfs with 45,000 cfs coming out of the dam and 18,000 cfs coming in from the James River. If flows exceed 70,000 cfs the sandbars at RM 782.5, 781.5, 781.0 and 777.7 will probably be inundated. The sandbar at RM 791.5 will probably be available at 70,000 cfs, but will be further reduced in size. Though not surveyed, at 63,000 cfs (plus an additional 4,000 cfs coming in from the Vermillion River at RM 771.0) all historic plover nesting sandbars and constructed sandbars below RM 777.7 are believed inundated.

Classification: UNCLASSIFIED
Caveats: NONE

[REDACTED] NWO

From: McMahon, John R BG NWD
Sent: [REDACTED] 9:07 PM
To: Temple, Bo M MG HQ02; Grisoli, William T MG HQ02; [REDACTED]
[REDACTED] HQ02; Walsh, Michael J MG MVD; Peabody, John W MG LRDOR
Cc: Anderson, G Witt NWD; Farhat, Jody S NWD02; Blechinger, Erik T NWO; Ruch, Robert J
COL NWO; Hofmann, Anthony J COL NWK; Tipton, Robert A Col NWD; [REDACTED]
NWD
Subject: Missouri Basin Water Management (WM)Update

Sirs:

Conducted a WM update with my team this afternoon following the Chief's ceremony. As you know, NWD has been holding releases from Gavin's Point (GP) at 45Kcfs since last Thursday, as well as reducing releases out of Stockton Lake on the Osage River (NWK) to 0 since last Wed, giving some "relief" to the system at Cairo beginning 6 May. Given the travel times involved (10+ days and 3+ days, respectively), the intended effects are delayed but appreciated by my battle Buddies in MVD and LRD--to quote them, every inch counts. We continue to be mindful (but "comfortable") of the near record amounts of snow pack in the Rookies, currently at between 136-140% of normal.

Based on the new monthly reservoir forecasts and analysis by our Missouri Basin Reservoir Control Center (RCC) in Omaha, and the building total system storage amounts in the upper basin now at the 2d highest level ever at 44 MAF, we have assessed our next moves as follows:

1. Maintain releases from GP at 45Kcfs until at least, Sat, 7 May, which continues the intended effects at Cairo until 17 May (+/-).
2. Effective immediately, increase releases from Stockton to 1.2Kcfs (from 0) as requested by SWAPA to accommodate power needs--we are obligated to meet this minimal requirement.
3. NET Sat, 7 May, we will begin increases at GP by 3Kcfs every other day until we get to a level of 57.5 Kcfs. This begins our serious efforts to evacuate the system between now and December.

Of course, all of this is subject to change due to actual rainfall, snow melt, and near term weather forecasts, which if anything like last summer, put us in a big bind. We will continue to monitor the situation in all three basins closely and make prudent adjustments in coordination with the others.

Vr/John



State of North Dakota

Office of the State Engineer

900 EAST BOULEVARD AVE. • BISMARCK, ND 58505-0850
701-328-2750 • FAX 701-328-3696 • <http://swc.nd.gov>

April 20, 2011

Brigadier General John R. McMahon
Commander and Division Engineer
U.S. Army Corps of Engineers
1125 NW Couch St., Suite 500
Portland, OR 97209

RE: High Missouri River System Reservoir Levels

Dear Brigadier General McMahon:

I am concerned with the high levels of Lake Sakakawea and Lake Oahe, and the above normal snowpack that will be generating a great deal of additional runoff. We are concerned your forecast does not adequately address the current conditions in the basin and the potential for above normal precipitation this summer.

As of April 20, Lake Oahe had the second highest daily April elevation of 1616.8 feet, only to be exceeded in April 1997; and Lake Sakakawea had the third highest daily April elevation of 1845.1 feet, surpassed by April of 1972, and 1997. The mountain snowpack is well above average at 114% and the plains spring runoff is currently ongoing. The downstream discharges seem low compared to the mountain snowpack, and the current availability of flood storage.

I ask the Corps to limit the usage of the exclusive flood pools to only when absolutely necessary. We urge the Corps to be cognizant of impacts that high releases out of the dams have on channel erosion, and encourage the Corps to have enough foresight so the evacuation of water can be made in an orderly fashion and limit unnecessary peaking. I also ask the Corps to review the runoff forecast and ensure its accuracy.

I thank you for taking my concerns under consideration.

Sincerely,


Todd Sando, P.E.
State Engineer

TS:BE:KC:mmmb/1392



[REDACTED] NWO

From: [REDACTED] NWD02
Sent: Tuesday, May 03, 2011 2:33 PM
To: Farhat, Jody S NWD02; [REDACTED] NWD02
Cc: [REDACTED] NWD02
Subject: RE: May 1 Service Level Computation (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

I made the changes in the FUITESTL file for +30 kcfs service level. Just so that everyone is singing from the same sheet of music ... Wednesday FUI - show 45 kcfs for next 2 weeks. We wait until the press release is sent out before showing the increases to 57.5 kcfs, correct?

- Kevin

[REDACTED]
[REDACTED]
Missouri River Basin Water Management,
Northwestern Division, USACE

[REDACTED] (fax)

-----Original Message-----

From: [REDACTED] NWD02
Sent: Tuesday, May 03, 2011 1:33 PM
To: Farhat, Jody S NWD02; [REDACTED] NWD02; [REDACTED] NWD02; [REDACTED]
NWD02
Subject: RE: May 1 Service Level Computation (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Jody,
We checked the numbers and everything looks correct. We agree with your recommendation to round the service level up to 65,000 cfs. The May AOP table value for full service is 28,000 cfs. An increase in service level of +30 would put the release at 58,000 cfs which fits more with the study value (57,500).

[REDACTED]
-----Original Message-----

From: Farhat, Jody NWD02
Sent: Monday, May 02, 2011 4:56 PM
To: [REDACTED] NWD02; [REDACTED] NWD02; [REDACTED] NWD02; [REDACTED]
NWD02
Subject: RE: May 1 Service Level Computation (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

We may want to use a slightly higher service level based on the monthly study that puts targets a bit closer to our releases (57,500 cfs) plus normal incremental inflow. If we use these numbers directly we're going to be showing being well above our flood targets for

months until the tribs start declining in earnest. If we cut back to stay below the limits, we'll just end up increasing service level later.

Can you double check the figures and make sure you've properly accounted for all runoff, and then if these are still the service levels, I recommend we round up to the nearest 5,000 cfs and make the Service level 65,000 cfs.

Jody

-----Original Message-----

From: [REDACTED] NWD02

Sent: Monday, May 02, 2011 3:40 PM

To: Farhat, Jody S NWD02; [REDACTED] NWD02; [REDACTED] NWD02; [REDACTED] NWD02

Subject: May 1 Service Level Computation (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: NONE

FYI.

[REDACTED]
[REDACTED]
Missouri River Basin Water Management,
Northwestern Division, USACE
402 [REDACTED]
402 [REDACTED] (fax)

Classification: UNCLASSIFIED

Caveats: NONE

Classification: UNCLASSIFIED

Caveats: NONE

Classification: UNCLASSIFIED

Caveats: NONE

Classification: UNCLASSIFIED

Caveats: NONE

[REDACTED] NWO

From: [REDACTED] NWD02
Sent: Tuesday, May 03, 2011 1:33 PM
To: Farhat, Jody S NWD02; [REDACTED] NWD02; [REDACTED] NWD02
Subject: RE: May 1 Service Level Computation (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Jody,
We checked the numbers and everything looks correct. We agree with your recommendation to round the service level up to 65,000 cfs. The May AOP table value for full service is 28,000 cfs. An increase in service level of +30 would put the release at 58,000 cfs which fits more with the study value (57,500).

-----Original Message-----

From: Farhat, Jody S NWD02
Sent: Monday, May 02, 2011 4:56 PM
To: [REDACTED] NWD02; [REDACTED] NWD02; [REDACTED] NWD02; [REDACTED] NWD02
Subject: RE: May 1 Service Level Computation (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

We may want to use a slightly higher service level based on the monthly study that puts targets a bit closer to our releases (57,500 cfs) plus normal incremental inflow. If we use these numbers directly we're going to be showing being well above our flood targets for months until the tribs start declining in earnest. If we cut back to stay below the limits, we'll just end up increasing service level later.

Can you double check the figures and make sure you've properly accounted for all runoff, and then if these are still the service levels, I recommend we round up to the nearest 5,000 cfs and make the Service level 65,000 cfs.

Jody

-----Original Message-----

From: [REDACTED] NWD02
Sent: Monday, May 02, 2011 3:40 PM
To: Farhat, Jody S NWD02; [REDACTED] NWD02; [REDACTED] NWD02; [REDACTED] NWD02
Subject: May 1 Service Level Computation (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

FYI.

[REDACTED]
Missouri River Basin Water Management,

Northwestern Division, USACE

 (fax)

Classification: UNCLASSIFIED

Caveats: NONE

Classification: UNCLASSIFIED

Caveats: NONE

Classification: UNCLASSIFIED

Caveats: NONE

[REDACTED] NWO

From: Farhat, Jody S NWD02
Sent: Thursday, May 05, 2011 9:29 AM
To: Anderson, G Witt NWD; [REDACTED] NWD; [REDACTED] NWD02
Subject: Fw: Truman Reservoir Releases (UNCLASSIFIED)

Info on Truman release plans for the coordination calls today.

----- Original Message -----

From: [REDACTED] NWK
To: Farhat, Jody S NWD02
Cc: [REDACTED] NWD02; [REDACTED] NWK; [REDACTED] NWK; [REDACTED] NWK
Sent: Thu May 05 07:09:44 2011
Subject: FW: Truman Reservoir Releases (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Jody:

We plan to remain shut off at Truman until next Tuesday (May 10) in support of flood fighting on the Lower Mississippi. Truman is only slowly rising and no significant rain is in the forecast so we see only minor impacts on the pool level. We are also coordinating this with SWPA and Bagnell Dam.

We believe the political implications of increasing releases at Truman during one of the largest floods on record at Memphis would not be good.

[REDACTED]
Chief, Hydrologic Engineering Branch
Engineering Division
Kansas City District, Corps of Engineers
601 East 12th Street, Suite 547
Kansas City, MO 64106-2896
[REDACTED]

-----Original Message-----

From: [REDACTED] NWK
Sent: Tuesday, May 03, 2011 3:48 PM
To: [REDACTED] NWK; [REDACTED] NWK; [REDACTED] NWK
Subject: RE: Truman Reservoir Releases (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Thanks [REDACTED]. Who will reevaluate on Friday? The stilling basin work is likely to continue through June based on current construction schedule. Please consider resuming releases through the powerhouse as much as possible as soon as possible. Thanks.

[REDACTED]
Chief, Technical Support Branch
Operations Division
Phone: [REDACTED]
BBerry: [REDACTED]

-----Original Message-----

From: [REDACTED] NWK
Sent: Tuesday, May 03, 2011 3:38 PM
To: [REDACTED] NWK; [REDACTED] NWK
Subject: FW: Truman Reservoir Releases (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

[REDACTED]: During our call today with General McMahon, he requested we continue to limit releases from Truman until Friday (6 May) at which point we will reevaluate. The RCC is keeping releases from Gavins Point at 45,000 until Friday at which point they intend to increase to 57,500. They will release 57,500 cfs from then until December.

Some impacts of the higher release levels on the lower Missouri River of 57,500 cfs from Gavins Point are discussed in the attached document.

[REDACTED]
Chief, Hydrologic Engineering Branch
Engineering Division
Kansas City District, Corps of Engineers
601 East 12th Street, Suite 547
Kansas City, MO 64106-2896
[REDACTED]

-----Original Message-----

From: [REDACTED] NWK
Sent: Tuesday, May 03, 2011 11:45 AM
To: Farhat, Jody S NWD02
Cc: [REDACTED] NWD02; [REDACTED] NWK; [REDACTED] NWK
Subject: Truman Reservoir Releases (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Jody,

In our continued efforts to assist with the Mississippi River flooding we will limit releases from Truman to the Firm Power requirement of 1200 cfs. After reviewing the Osage River basin conditions, we are comfortable with maintaining the 1200 cfs release for the remainder of this work week. Truman reservoir is currently at 10.2% of Flood Control Pool occupied and the forecast for Friday is 12.5% Flood Control Pool occupied.

We will re-evaluate Friday for the weekend. We continue to monitor the forecasts on the Mississippi and Ohio Rivers.

[REDACTED]
Chief, Water Management Section
USACE - Kansas City District
[REDACTED]

NWO

From: Farhat, Jody S NWD02
Sent: Thursday, May 05, 2011 9:35 AM
To: [REDACTED] NWK
Cc: [REDACTED] NWD02; [REDACTED] NWK; [REDACTED] NWK; [REDACTED] NWK; Anderson, G Witt NWD; [REDACTED] NWD; [REDACTED] NWD02
Subject: Re: Truman Reservoir Releases (UNCLASSIFIED)

Jim, sounds like a good plan. I'm sure the folks downstream will appreciate any relief you can provide and it sounds like this can be done without negatively impacting Truman or other NWK projects. As always we ask you and your staff to be alert for changing local conditions and be prepared to change course if needed.

Thanks,
Jody

----- Original Message -----

From: [REDACTED] NWK
To: Farhat, Jody S NWD02
Cc: [REDACTED] NWD02; [REDACTED] NWK; [REDACTED] NWK; [REDACTED] NWK
Sent: Thu May 05 07:09:44 2011
Subject: FW: Truman Reservoir Releases (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Jody:

We plan to remain shut off at Truman until next Tuesday (May 10) in support of flood fighting on the Lower Mississippi. Truman is only slowly rising and no significant rain is in the forecast so we see only minor impacts on the pool level. We are also coordinating this with SWPA and Bagnell Dam.

We believe the political implications of increasing releases at Truman during one of the largest floods on record at Memphis would not be good.

[REDACTED]
Chief, Hydrologic Engineering Branch
Engineering Division
Kansas City District, Corps of Engineers
601 East 12th Street, Suite 547
Kansas City, MO 64106-2896
[REDACTED]

-----Original Message-----

From: [REDACTED] NWK
Sent: Tuesday, May 03, 2011 3:48 PM
To: [REDACTED] NWK; [REDACTED] NWK; [REDACTED] NWK
Subject: RE: Truman Reservoir Releases (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Thanks [REDACTED] Who will reevaluate on Friday? The stilling basin work is likely to continue through June based on current construction schedule. Please consider resuming releases through the powerhouse as much as possible as soon as possible. Thanks.

[REDACTED]
Chief, Technical Support Branch
Operations Division
Phone: [REDACTED]
BBerry: [REDACTED]

-----Original Message-----

From: [REDACTED] NWK
Sent: Tuesday, May 03, 2011 3:38 PM
To: [REDACTED] NWK; [REDACTED] NWK
Subject: FW: Truman Reservoir Releases (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

[REDACTED]: During our call today with General McMahon, he requested we continue to limit releases from Truman until Friday (6 May) at which point we will reevaluate. The RCC is keeping releases from Gavins Point at 45,000 until Friday at which point they intend to increase to 57,500. They will release 57,500 cfs from then until December.

Some impacts of the higher release levels on the lower Missouri River of 57,500 cfs from Gavins Point are discussed in the attached document.

[REDACTED]
Chief, Hydrologic Engineering Branch
Engineering Division
Kansas City District, Corps of Engineers
601 East 12th Street, Suite 547
Kansas City, MO 64106-2896
[REDACTED]

-----Original Message-----

From: [REDACTED] NWK
Sent: Tuesday, May 03, 2011 11:45 AM
To: Farhat, Jody S NWD02
Cc: [REDACTED] NWD02; [REDACTED] NWK; [REDACTED] NWK
Subject: Truman Reservoir Releases (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Jody,

In our continued efforts to assist with the Mississippi River flooding we will limit releases from Truman to the Firm Power requirement of 1200 cfs. After reviewing the Osage River basin conditions, we are comfortable with maintaining the 1200 cfs release for the remainder of this work week. Truman reservoir is currently at 10.2% of Flood Control Pool occupied and the forecast for Friday is 12.5% Flood Control Pool occupied.

We will re-evaluate Friday for the weekend. We continue to monitor the forecasts on the Mississippi and Ohio Rivers.

~~_____~~
Chief, Water Management Section
USACE - Kansas City District
~~_____~~

Classification: UNCLASSIFIED
Caveats: NONE

Classification: UNCLASSIFIED
Caveats: NONE

Classification: UNCLASSIFIED
Caveats: NONE

Classification: UNCLASSIFIED
Caveats: NONE

Classification: UNCLASSIFIED
Caveats: NONE

[REDACTED] NWO

From: [REDACTED] NWD02
Sent: Thursday, May 05, 2011 4:23 PM
To: Farhat, Jody S NWD02
Subject: FW: Deviation REQUEST for Phase I releases not to exceed 130K at Waverly (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

FYI. Here's the email trail from last year's deviation request regarding Waverly.

[REDACTED]
[REDACTED]
Missouri River Basin Water Management,
Northwestern Division, USACE

[REDACTED]
[REDACTED] (fax)

-----Original Message-----

From: Farhat, Jody S NWD02
Sent: Thursday, July 29, 2010 4:21 PM
To: [REDACTED] NWK
Cc: [REDACTED] NWD02
Subject: RE: Deviation REQUEST for Phase I releases not to exceed 130K at Waverly

[REDACTED]
The deviation request is approved. We believe it is prudent to continue evacuating storage from the Kansas River Basins projects in this manner.

Regards,
Jody

-----Original Message-----

From: [REDACTED] NWK
Sent: Thursday, July 29, 2010 2:12 PM
To: Farhat, Jody S NWD02
Cc: [REDACTED] NWD02
Subject: FW: Deviation REQUEST for Phase I releases not to exceed 130K at Waverly
Importance: High

Hello Jody,

Request continued approval, thru 02 September 2010, to release Phase I water from our Kansas River Basin projects, not to exceed 130,000 cfs at Waverly.

[REDACTED]
-----Original Message-----

From: [REDACTED] NWK
Sent: Friday, July 02, 2010 1:10 PM

To: Farhat, Jody S NWD02

Cc: [REDACTED] NWK; [REDACTED] NWK; [REDACTED] NWK; [REDACTED] NWD02

Subject: Deviation REQUEST for Phase I releases not to exceed 130K at Waverly

Importance: High

Hello Jody,

Operation of Corps of Engineers' reservoirs within the Kansas River Basin is based on control points within the Kansas River Basin and, ultimately, by the Missouri River at Waverly. The Waverly gage target flows for Phase I/II/III flood control releases from the Kansas River Basin are 90K/130K/170K, respectively. Phase I flood control releases have not been possible in recent weeks because of flows in excess of 90K cfs at Waverly.

The reservoirs at Milford, Harlan County, Lovewell, Tuttle Creek, and Perry each have approximately 30% of their available flood control storage occupied. Milford and Tuttle Creek are in Phase II storage. Long term storage of water near the upper end of the Phase I flood control pool presents operational problems and increased expense for the Lake Projects. Milford and Tuttle Creek are within "increased surveillance," while Clinton Lake is within a foot of "increased surveillance." Recent trends in rainfall distribution, river gage readings, and storage within the Mainstem Missouri River Basin reservoirs suggest that -- well into the future -- the gage at Waverly will not permit Phase I releases from the Kansas River Basin. Consequently, there appears to be little opportunity to reduce surveillance efforts at Milford or Tuttle Creek and no opportunity to prevent Clinton from rising into "increased surveillance."

In an effort to mitigate against these negative effects, we request a deviation to permit Phase I releases from the Kansas River Basin not to exceed 130K cfs on the Missouri River at Waverly.

Respectfully,

[REDACTED]
[REDACTED]
Chief, Water Management Section
Kansas City District, USACE
[REDACTED]

Classification: UNCLASSIFIED

Caveats: NONE

[REDACTED] NWO

From: [REDACTED] NWK
Sent: Thursday, May 05, 2011 3:39 PM
To: Farhat, Jody S NWD02
Cc: [REDACTED] NWD02; [REDACTED] NWD02; [REDACTED] NWK
Subject: RE: DRAFT Waverly Deviation Request

I apologize for any misunderstanding. The releases, while not excessive, are higher than possible with a strict manual interpretation. Do you recommend any changes to the draft document?

[REDACTED]
-----Original Message-----

From: Farhat, Jody S NWD02
Sent: Thursday, May 05, 2011 3:35 PM
To: [REDACTED] NWK
Cc: [REDACTED] NWD02; [REDACTED] NWD02; [REDACTED] NWK
Subject: Re: DRAFT Waverly Deviation Request

My understanding on Monday was that releases were within your manuals. If they're not, then it is certainly appropriate to send the request now.

Jody

----- Original Message -----

From: Parker, Edward E NWK
To: Farhat, Jody S NWD02
Cc: Grode, Kevin R NWD02; Swenson, Michael A NWD02; Shumate, Eric D NWK
Sent: Thu May 05 12:53:06 2011
Subject: RE: DRAFT Waverly Deviation Request

Jody,

I guess that I am confused also, and I hope that I am not out of line. Based on the current WCM, we should currently release no more than low-flow from the Kansas Basin projects (Milford 25 cfs, Tuttle 100 cfs, Perry 25 cfs and Clinton 21 cfs). We are currently only letting out 500 cfs each from Milford and Tuttle (total 1,000 cfs). It is not much, but it is more than low-flow (125 cfs combined). As long as you guys are comfortable with us continuing our release, then we don't need a deviation. We just don't want to go to low-flow, store water in the flood pool, and then ask for a deviation that we already know we will need.

If we don't go ahead and get one now, what should we use as our decision point for the request?

Thank you very much for all your help!!!
[REDACTED]

-----Original Message-----

From: Farhat, Jody S NWD02
Sent: Thursday, May 05, 2011 2:36 PM
To: [REDACTED] NWK
Cc: [REDACTED] NWD02; [REDACTED] NWD02
Subject: Re: DRAFT Waverly Deviation Request

I'm confused. I thought [REDACTED] and I agreed on Monday that this deviation request wouldn't be sent until needed to evacuate water from a project. Is this the case currently or is this an advance look at a deviation that will be sent at some later point, or did NWK change their mind and decide they want this in advance of needing it? In general, I don't think it's prudent for us to give an advance blanket deviation approval.

Jody

----- Original Message -----

From: [REDACTED] NWK
To: Farhat, Jody S NWD02
Cc: [REDACTED] NWD02
Sent: Thu May 05 11:52:00 2011
Subject: DRAFT Waverly Deviation Request

Jody & [REDACTED]

Attached is a draft deviation request for the Phase I flow rate at the Waverly gage. Please review and let us know your comments and concerns.

THANKS!!
parker

[REDACTED] NWO

From: [REDACTED] NWK
Sent: Thursday, May 05, 2011 2:53 PM
To: Farhat, Jody S NWD02
Cc: [REDACTED] NWD02; [REDACTED] NWD02; [REDACTED] NWK
Subject: RE: DRAFT Waverly Deviation Request

Jody,

I guess that I am confused also, and I hope that I am not out of line. Based on the current WCM, we should currently release no more than low-flow from the Kansas Basin projects (Milford 25 cfs, Tuttle 100 cfs, Perry 25 cfs and Clinton 21 cfs). We are currently only letting out 500 cfs each from Milford and Tuttle (total 1,000 cfs). It is not much, but it is more than low-flow (125 cfs combined). As long as you guys are comfortable with us continuing our release, then we don't need a deviation. We just don't want to go to low-flow, store water in the flood pool, and then ask for a deviation that we already know we will need.

If we don't go ahead and get one now, what should we use as our decision point for the request?

Thank you very much for all your help!!!

-----Original Message-----

From: Farhat, Jody S NWD02
Sent: Thursday, May 05, 2011 2:36 PM
To: [REDACTED] NWK
Cc: [REDACTED] NWD02; [REDACTED] NWD02
Subject: Re: DRAFT Waverly Deviation Request

I'm confused. I thought [REDACTED] and I agreed on Monday that this deviation request wouldn't be sent until needed to evacuate water from a project. Is this the case currently or is this an advance look at a deviation that will be sent at some later point, or did NWK change their mind and decide they want this in advance of needing it? In general, I don't think it's prudent for us to give an advance blanket deviation approval.

Jody

----- Original Message -----

From: [REDACTED] NWK
To: Farhat, Jody S NWD02
Cc: [REDACTED] R NWD02
Sent: Thu May 05 11:52:00 2011
Subject: DRAFT Waverly Deviation Request

Jody & [REDACTED]

Attached is a draft deviation request for the Phase I flow rate at the Waverly gage. Please review and let us know your comments and concerns.

THANKS!!

[REDACTED] NWO

From: [REDACTED] NWK
Sent: Thursday, May 05, 2011 1:52 PM
To: Farhat, Jody S NWD02
Cc: [REDACTED] NWD02
Subject: DRAFT Waverly Deviation Request
Attachments: WaverlyDeviation.docx

Jody & [REDACTED]

Attached is a draft deviation request for the Phase I flow rate at the Waverly gage. Please review and let us know your comments and concerns.

THANKS!!
parker

CENWK-ED-HC

MEMORANDUM FOR Chief, Missouri River Basin Water Management Division
(CENWD-PDR)

SUBJECT: Deviation Request – Waverly Control Point, Missouri River

1. The Kansas City District requests a deviation from the Phase I control point flow for the Waverly gage on the Missouri River. The lakes in the Lower Kansas River basin (Milford, Tuttle Creek, Perry, and Clinton) are operated with consideration of numerous Kansas River control points, as well as Missouri River control points at Kansas City and Waverly. Historically, the Waverly control point has often been the determining gage when setting releases due to its relatively low flow criteria.

2. The Waverly gage control flows for Phase I/II/III flood control releases are 90K/130K/170K respectively. Due to historic volumes of water currently stored within the mainstem projects and snowpack upstream of Gavins Point, the mainstem projects will be releasing 30K cfs more than required for Missouri River navigation. The full navigation target for the Kansas City gage, upstream of Waverly, is 41K cfs. Missouri River baseflow will likely exceed 70K cfs at the Waverly gage due to uncontrolled intervening flow. Major Missouri River tributaries between Gavins Point and Waverly include the: James, Platte (Nebraska), Nishnabatna, Nemaha, Nodaway, Platte (Missouri), and the Kansas Rivers. Such conditions leave very little channel space available for any Phase I releases from the Kansas Basin projects. The Missouri River flow at Waverly has not been below 90K cfs since mid-April, even though significant releases have not been made from the Kansas River projects.

3. A Waverly control point deviation would permit releases from the Kansas projects without requiring water storage within the flood control zone up to the Phase II levels. Requiring that the lakes store water up to the Phase II zone will negatively affect the recreation beneficial purpose, increase the flood risk due to less available flood control volume in the lakes, and could increase government expense due to increased surveillance requirements.

4. We request a deviation to increase the Phase I Waverly criteria from 90K to the Phase II level of 130K cfs. The National Weather Service flood stage for Waverly is 20 feet (128K cfs). We request the deviation until July 31, 2011, or Gavins Point releases are returned to more normal levels, whichever occurs first.

[REDACTED]

Route through [REDACTED] (ED-HC)

[REDACTED] NWO

From: [REDACTED] NWD02
Sent: Thursday, May 05, 2011 12:04 PM
To: [REDACTED] NWD02
Cc: [REDACTED] NWD02
Subject: RE: News releases (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Mt was pleased to hear the news. The timing has been a little off as we have delayed a day or two from when they were expecting it but we have been keeping Steve Dalbey up to date.

-----Original Message-----

From: Farhat, Jody S NWD02
Sent: Thursday, May 05, 2011 11:52 AM
To: [REDACTED] NWD02; [REDACTED] NWD02
Subject: Re: News releases (UNCLASSIFIED)

Very good. We've talked to Todd Sando so proceed with the release increases even if you can't reach Dave today.

Did ND or MT have any requests/concerns. I remember at the MT meeting they were interested in doing do additional data collection if we spilled.

Jody

----- Original Message -----

From: [REDACTED] NWD02
To: Farhat, Jody S NWD02; [REDACTED] NWD02
Sent: Thu May 05 09:24:52 2011
Subject: RE: News releases (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Have already talked to Mt. And SD. I'm still trying ND. I expect to talk to Dave Frieda this afternoon.

-----Original Message-----

From: Farhat, Jody S NWD02
Sent: Thursday, May 05, 2011 11:18 AM
To: [REDACTED] NWD02; [REDACTED] NWD02
Subject: Fw: News releases (UNCLASSIFIED)

On second thought I have a question for you. Have we coordinated with the state water and fishery folks in MT, ND and SD on our additional releases? We owe it to talk to them before going up so they are not caught off guard. Please make some phone calls today. If that's not possible it may be prudent to delay a day.

Jody

Classification: UNCLASSIFIED
Caveats: NONE

[REDACTED] NWO

From: [REDACTED] NWD02
Sent: Thursday, May 05, 2011 11:25 AM
To: Farhat, Jody S NWD02; [REDACTED] NWD02
Subject: RE: News releases (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Have already talked to Mt. And SD. I'm still trying ND. I expect to talk to Dave Frieda this afternoon.

-----Original Message-----

From: Farhat, Jody S NWD02
Sent: Thursday, May 05, 2011 11:18 AM
To: [REDACTED] NWD02; [REDACTED] NWD02
Subject: Fw: News releases (UNCLASSIFIED)

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Jody

Classification: UNCLASSIFIED
Caveats: NONE

[REDACTED] NWO

From: [REDACTED] NWD02
Sent: Thursday, May 05, 2011 10:29 AM
To: Farhat, Jody S NWD02
Subject: RE: News releases (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Jody,
We are trying to work with the project personnel (FPTK, GARR, OAHE) on the schedule for tomorrow and the weekend. Are you okay with us scheduling the spillway/outlet releases for tomorrow at 0800? This may be slightly ahead of the press releases.

[REDACTED]
-----Original Message-----
From: Farhat, Jody S NWD02
Sent: Thursday, May 05, 2011 7:52 AM
To: [REDACTED] NWD02
Subject: Re: News releases (UNCLASSIFIED)

Yes.

----- Original Message -----
From: [REDACTED] NWD02
To: Farhat, Jody S NWD02
Sent: Thu May 05 05:44:38 2011
Subject: RE: News releases (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Jody,
My apologies on the press releases. We were scheduled to make spillway releases this morning at Fort Peck and outlet tunnel releases this afternoon at Oahe. Would it be your preference to postpone those until Friday so we have time to properly rework the press releases?

[REDACTED]
-----Original Message-----
From: Farhat, Jody S NWD02
Sent: Thursday, May 05, 2011 12:38 AM
To: [REDACTED] A NWD02; [REDACTED] R NWD02
Subject: News releases (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

[REDACTED]
I picked up the press releases from V:\public, though I'm not sure if those were the most current. Actually, I hope they weren't.

I spent quite a bit of time working on the Fort Peck release (see attached) - not that it's the most important, but it was the first one I opened.

Quite frankly, they are all a mess. If these are the latest copies, I'm disappointed.

I expect you two to read these press releases (and every email, letter, paper and report we produce) with a VERY critical eye. Don't just read the words, engage your brain. Your job is not to correct grammar, it's to make sure that the facts are correct and that we're telling the story WE want to tell in the way WE want to tell it.

Don't say things like "near record snowfall" unless YOU'VE looked at all the records and determined that it is, in fact, near a record. Hearsay or close to the truth is not good enough. Our press releases must be factual.

Don't be afraid to delete everything that Monique puts in the draft. If it's not the right information, don't just tweak around the edges trying to make it better, REWRITE IT!

Ask yourself, what messages would I want to pass along to Buzz Matelin or Todd Sando or John Drew if I had them on the phone? What concerns would they be expressing to me? What would they be asking? That's what needs to go in the press release! If it's full of inaccuracies or doesn't get our message across, why are we doing this?

It's late, and I've peeved, so I'm quitting here. You two can take my edits from this one and try to fix the other two, or blow it off and I'll work on them when I get back in the office. Either way, they aren't going out before Friday. I'm planning on skipping the last half of the ESC meeting heading back to Omaha tomorrow night. I'll be in the office on Friday.

I may regret pushing send; I don't like to send seething emails, but I want you to know and understand my frustration. This is going to be a challenging year and we all have to give 110 percent. We shouldn't have to check each other's work! We're it, we're a team, we're all there is, and any one of us ought to be able to write a report or press release that needs no editing by the other two. I expect more of you both, and I know that you're capable or I wouldn't have selected you for positions of leadership in our office.

Jody

Classification: UNCLASSIFIED
Caveats: NONE

Classification: UNCLASSIFIED
Caveats: NONE

Classification: UNCLASSIFIED
Caveats: NONE

[REDACTED] NWO

From: Ruch, Robert J COL NWO
Sent: Thursday, May 05, 2011 10:21 AM
To: McMahon, John R BG NWD
Cc: Farhat, Jody S NWD02; Hofmann, Anthony J COL NWK
Subject: RE: Follow up: Impacts of increased flow from GP to Lower Missouri River Basin
Attachments: L-550 Water.jpg

Sir,

Attached is a picture from yesterday of water on L-550 which is the levee you visited with me last year during flooding in northern Missouri. The water is already creeping up the levee. I am happy that we got the riverside work done over the winter but we will have to be extra vigilant as all there is additional work landside including secondary berms and relief wells that are still being worked. You will recall that even after the water receded we were still having sand boil issues through the summer last year.

V/R,

bob

-----Original Message-----

From: Hofmann, Anthony J COL NWK
Sent: Thursday, May 05, 2011 9:53 AM
To: McMahon, John R BG NWD
Cc: [REDACTED] NWK; [REDACTED] NWK; Farhat, Jody S NWD02; Ruch, Robert J COL NWO; [REDACTED] NWO; [REDACTED] NWK
Subject: Follow up: Impacts of increased flow from GP to Lower Missouri River Basin

Sir-

A follow-up from Tuesday's conference call.

Details provided by [REDACTED]

As you know, no easy explanation. However, I would summarize that the biggest impact of increased GP flows in the area from Rulo to KC. This has been a challenging area for some time and was last year as well. Key will be what type of precipitation we get in our area as this will have additional impacts.

Details below. Overall conditions in the lower basin have been favorable as precipitation has not been significant lately.

Tony

In our continued efforts to assist with the Mississippi River flooding, we will limit releases from Truman to the Firm Power requirement of 1200 cfs. After reviewing the Osage River basin conditions, we are comfortable with maintaining the 1200 cfs release for the remainder of this work week. Truman reservoir is currently at 10.2% of Flood Control Pool occupied and the forecast for Friday is 12.5% Flood Control Pool occupied.

We will re-evaluate Friday for the weekend. We continue to monitor the forecasts on the Mississippi and Ohio Rivers.

The 57.5 kcfs discharge from Gavins Point will affect river stages and interior drainage upstream of Waverly. The Gavins Point releases will maintain stages at Rulo and St. Joseph near or above flood stage for the duration of the spring and summer, where the 57.5 kcfs is 66% and 60% of the flood stage discharges, respectively. We have been fortunate thus far

avoiding significant rainfall in the Lower Missouri Basin, but any significant rainfall below Gavins Point will likely result in stages well above flood stage upstream of Kansas City. The effects will diminish below Waverly. At Waverly, the 57.5 kcfs is approximately 50% of the flood stage discharge (122 kcfs).

The scheduled 57.5 kcfs release will have serious impacts on interior drainage of croplands behind levees upstream of St. Joseph. The interior drainage impacts will be lesser, but remain significant to moderate from St. Joseph to Kansas City and moderate from Kansas City to Waverly. The high river stages will also result in increased groundwater elevations, adding to the interior drainage issues. Flood stage also overtops banks along the river and floods cultivated fields between the river and outside of the levees.

This discharge will also impact our Kansas River operations, as our flow target for Kansas River releases is at Waverly. Currently, our Kansas River basin lakes are all near 0% of flood pool occupied. However, should the Kansas River lakes begin to collect runoff, our releases are limited by a 90 kcfs target at Waverly. The Missouri River will likely be at or above that discharge throughout the spring and summer. We will thus need a deviation from Jody Farhat (MRWM) to increase releases from the Kansas Basin.

James Pennaz, P.E.

Chief, Hydrologic Engineering Branch

Engineering Division



NWO

From: Hofmann, Anthony J COL NWK
Sent: Thursday, May 05, 2011 9:53 AM
To: McMahon, John R BG NWD
Cc: [REDACTED] NWK; [REDACTED] NWK; Farhat, Jody S NWD02; Ruch, Robert J COL NWO; [REDACTED] NWO; [REDACTED] NWK
Subject: Follow up: Impacts of increased flow from GP to Lower Missouri River Basin

Sir-

A follow-up from Tuesday's conference call.

Details provided by [REDACTED] NWK Chief, Hydrologic Engineering Division

As you know, no easy explanation. However, I would summarize that the biggest impact of increased GP flows in the area from Rulo to KC. This has been a challenging area for some time and was last year as well. Key will be what type of precipitation we get in our area as this will have additional impacts.

Details below. Overall conditions in the lower basin have been favorable as precipitation has not been significant lately.

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[REDACTED] NWO

From: [REDACTED] NWD
Sent: Thursday, May 05, 2011 9:47 AM
To: Farhat, Jody S NWD02; Anderson, G Witt NWD
Subject: RE: Truman Reservoir Releases (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Thx

There is a short call at 1100 pacific again today with program directors at MVD and LRD. I plan to call in. I will forward the call in info to you two.

-----Original Message-----

From: Farhat, Jody S NWD02
Sent: Thursday, May 05, 2011 7:29 AM
To: Anderson, G Witt NWD; [REDACTED] NWD; [REDACTED] NWD02
Subject: Fw: Truman Reservoir Releases (UNCLASSIFIED)

Info on Truman release plans for the coordination calls today.

----- Original Message -----

From: [REDACTED] NWK
To: Farhat, Jody S NWD02
Cc: [REDACTED] R NWD02; [REDACTED] D NWK; [REDACTED] NWK; [REDACTED] NWK
Sent: Thu May 05 07:09:44 2011
Subject: FW: Truman Reservoir Releases (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Jody:

We plan to remain shut off at Truman until next Tuesday (May 10) in support of flood fighting on the Lower Mississippi. Truman is only slowly rising and no significant rain is in the forecast so we see only minor impacts on the pool level. We are also coordinating this with SWPA and Bagnell Dam.

We believe the political implications of increasing releases at Truman during one of the largest floods on record at Memphis would not be good.

[REDACTED]
[REDACTED]
Engineering Division
Kansas City District, Corps of Engineers
601 East 12th Street, Suite 547
Kansas City, MO 64106-2896
[REDACTED]

-----Original Message-----

From: [REDACTED] NWK
Sent: Tuesday, May 03, 2011 3:48 PM
To: [REDACTED] NWK; [REDACTED] NWK; [REDACTED] NWK
Subject: RE: Truman Reservoir Releases (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Thanks [REDACTED] Who will reevaluate on Friday? The stilling basin work is likely to continue through June based on current construction schedule. Please consider resuming releases through the powerhouse as much as possible as soon as possible. Thanks.

[REDACTED]
[REDACTED]
Operations Division
[REDACTED]
[REDACTED] 616-866-1910

-----Original Message-----

From: [REDACTED] NWK
Sent: Tuesday, May 03, 2011 3:38 PM
To: [REDACTED] NWK; [REDACTED] R NWK
Subject: FW: Truman Reservoir Releases (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

[REDACTED] During our call today with General McMahon, he requested we continue to limit releases from Truman until Friday (6 May) at which point we will reevaluate. The RCC is keeping releases from Gavins Point at 45,000 until Friday at which point they intend to increase to 57,500. They will release 57,500 cfs from then until December.

Some impacts of the higher release levels on the lower Missouri River of 57,500 cfs from Gavins Point are discussed in the attached document.

[REDACTED]
[REDACTED]
Engineering Division
Kansas City District, Corps of Engineers
601 East 12th Street, Suite 547
Kansas City, MO 64106-2896
[REDACTED]

-----Original Message-----

From: [REDACTED] NWK
Sent: Tuesday, May 03, 2011 11:45 AM
To: Farhat, Jody S NWD02
Cc: [REDACTED] NWD02; [REDACTED] NWK; [REDACTED] NWK
Subject: Truman Reservoir Releases (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Jody,

In our continued efforts to assist with the Mississippi River flooding we will limit releases from Truman to the Firm Power requirement of 1200 cfs. After reviewing the Osage River basin conditions, we are comfortable with maintaining the 1200 cfs release for the remainder of this work week. Truman reservoir is currently at 10.2% of Flood Control Pool occupied and the forecast for Friday is 12.5% Flood Control Pool occupied.

We will re-evaluate Friday for the weekend. We continue to monitor the forecasts on the Mississippi and Ohio Rivers.

[REDACTED]
Chief, Water Management Section
USACE - Kansas City District
[REDACTED]

Classification: UNCLASSIFIED
Caveats: NONE

Classification: UNCLASSIFIED
Caveats: NONE

Classification: UNCLASSIFIED
Caveats: NONE

Classification: UNCLASSIFIED
Caveats: NONE

Classification: UNCLASSIFIED
Caveats: NONE

Classification: UNCLASSIFIED
Caveats: NONE

Burke, Linda E NWO

From: Pennaz, James NWK
Sent: Thursday, May 05, 2011 9:10 AM
To: Farhat, Jody S NWD02
Cc: Grode, Kevin R NWD02; Shumate, Eric L NWK; Parker, Edward E NWK; Bennett, Douglas M NWK
Subject: FW: Truman Reservoir Releases (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Jody:

We plan to remain shut off at Truman until next Tuesday (May 10) in support of flood fighting on the Lower Mississippi. Truman is only slowly rising and no significant rain is in the forecast so we see only minor impacts on the pool level. We are also coordinating this with SWPA and Bagnell Dam.

We believe the political implications of increasing releases at Truman during one of the largest floods on record at Memphis would not be good.

James Pennaz, P.E.
Chief, Hydrologic Engineering Branch
Engineering Division
Kansas City District, Corps of Engineers
601 East 12th Street, Suite 547
Kansas City, MO 64106-2896
816-389-3250

-----Original Message-----

From: Ryan, Kelly NWK
Sent: Tuesday, May 03, 2011 3:48 PM
To: Pennaz, James NWK; Goyal, Des R NWK; Hentschel, Peter NWK
Subject: RE: Truman Reservoir Releases (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Thanks Jim. Who will reevaluate on Friday? The stilling basin work is likely to continue through June based on current construction schedule. Please consider resuming releases through the powerhouse as much as possible as soon as possible. Thanks.

Kelly Ryan, PE, PMP
Chief, Technical Support Branch
Operations Division
Phone: 816-389-3324
BBerry: 816-808-2518

-----Original Message-----

From: Pennaz, James NWK
Sent: Tuesday, May 03, 2011 3:38 PM
To: Ryan, Kelly NWK; Goyal, Des R NWK
Subject: FW: Truman Reservoir Releases (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: NONE

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[REDACTED]
[REDACTED]
Engineering Division
Kansas City District, Corps of Engineers
601 East 12th Street, Suite 547
Kansas City, MO 64106-2896
[REDACTED]

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From: [REDACTED]
Sent: Tuesday, May 03, 2011 11:45 AM
To: Farhat, Jody S NWD02
Cc: [REDACTED] NWD02; [REDACTED] NWK; [REDACTED] NWK
Subject: Truman Reservoir Releases (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: NONE

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[REDACTED]
[REDACTED]
USACE - Kansas City District
[REDACTED]

Classification: UNCLASSIFIED

Caveats: NONE

Classification: UNCLASSIFIED

Caveats: NONE

[REDACTED] NWO

From: [REDACTED] NWD02
Sent: Thursday, May 05, 2011 7:45 AM
To: Farhat, Jody S NWD02
Subject: RE: News releases (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Jody,
My apologies on the press releases. We were scheduled to make spillway releases this morning at Fort Peck and outlet tunnel releases this afternoon at Oahe. Would it be your preference to postpone those until Friday so we have time to properly rework the press releases?

-----Original Message-----
From: Farhat, Jody S NWD02
Sent: Thursday, May 05, 2011 12:38 AM
To: [REDACTED] A NWD02; [REDACTED] R NWD02
Subject: News releases (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

[REDACTED] and [REDACTED]

I picked up the press releases from V:\public, though I'm not sure if those were the most current. Actually, I hope they weren't.

I spent quite a bit of time working on the Fort Peck release (see attached) - not that it's the most important, but it was the first one I opened.

Quite frankly, they are all a mess. If these are the latest copies, I'm disappointed.

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Jody

Classification: UNCLASSIFIED
Caveats: NONE

Classification: UNCLASSIFIED
Caveats: NONE

NWO

From: Farhat, Jody S NWD02
Sent: Friday, May 06, 2011 10:16 AM
To: Anderson, G Witt NWD; [REDACTED] NWD
Subject: LRD/MVD Call on Thursday (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Witt,
My notes from yesterday's call are below:

LRD/TVA will be holding current release rates at Kentucky and Barkley dams. Combined release is now 275,000 cfs. They have also rescinded the order to shut off releases from upstream tributary reservoirs. As a result, releases will be increased to evacuate stored flood water; this will add another 45 to 60 Kcfs to the forecast. The crest on the lower Ohio river will be long and flat due to lake-like conditions in the area.

MVD - focus is moving to the lower MS. At the time of the call they were moments away from opening up the 3rd crevasse in the Birds Point-Mew Madrid flood way. The river was cresting at Cairo. There is a strong likelihood that they will operate the Morganza and Bonnet-Carre' floodways in Louisiana.

I reported that we would begin to increase Gavins Point releases from 45,000 to 57,500 cfs on Saturday at a rate of about 3,000 cfs per day. Truman will be at minimum SWAPA releases through Monday. There is no change in our status to report for today's call.

Jody Farhat, P.E.
Chief, Missouri River Basin Water Management

jody.s.farhat@usace.army.mil
Office: 402-996-3840
Cell: 402-350-1417
Home: [REDACTED]

Classification: UNCLASSIFIED
Caveats: NONE

NWO

From: Farhat, Jody S NWD02
Sent: Friday, May 06, 2011 2:30 PM
To: [REDACTED] NWD02
Cc: [REDACTED] NWD02
Subject: FW: Gavins Point Projections (UNCLASSIFIED)
Attachments: 20110506_140344.pdf

Classification: UNCLASSIFIED
Caveats: NONE

Joel - can you provide the reply to this email for me?

Thanks,
Jody

-----Original Message-----

From: Jeff Dooley [<mailto:jeff.dooley@dakotadunes.com>]
Sent: Friday, May 06, 2011 2:10 PM
To: Farhat, Jody S NWD02
Subject: Gavins Point Projections

Hi Jody:

I was looking at your monthly forecast (attached). Do these forecasts spell out three separate scenarios - average, low and high? Does the 58.5 kcfs from Gavin's Point in the bottom scenario mean you expect to release that amount on average in May? Do the numbers in the discharge row for future months also mean you expect to release that amount on average? The bottom scenario indicates discharge of 68 kcfs, not counting the tributaries that would equate to about 23 ft at Sioux City (if I am thinking about this correctly). What do you foresee as river levels at Sioux City - given normal runoff?

Sorry for all the questions, but this document seems to give good insight on what we might expect. I just want to make sure I am interpreting it correctly.

Thank you in advance for any help on interpreting this document.

-----Original Message-----

From: kim.hoffman@dakotadunes.com [<mailto:kim.hoffman@dakotadunes.com>]
Sent: Friday, May 06, 2011 2:04 PM
To: jeff.dooley@dakotadunes.com
Subject: Scanned image from Dakota Dunes CID

Reply to: kim.hoffman@dakotadunes.com <kim.hoffman@dakotadunes.com> Device
Name: Not Set Device Model: MX-2300N
Location: Not Set

File Format: PDF MMR(G4)
Resolution: 200dpi x 200dpi

Attached file is scanned image in PDF format.
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<http://www.adobe.com/>

Classification: UNCLASSIFIED

Caveats: NONE

MAY 1, 2011 / BASIC CONDITION / 44.0 MAF / BALANCED
 FULL SERV / NAV SEAS +10 DAYS / NO MAY PULSE
 Elevations & Storages are for Date Shown
 Avg Discharge & Energy are Monthly Values
 Date of Study: May 1, 2011

	30-Apr-11	31-May	2011 30-Jun	31-Jul	31-Aug	30-Sep	31-Oct	30-Nov	31-Dec	2012 31-Jan	29-Feb
FORT PECK -----											
ELEV FTMSL	2240.9	2243.1	2247.9	2247.7	2245.3	2242.7	2240.4	2238.3	2236.8	2235.2	2234.0
DISCH KCFS	7.1	18.0	20.0	20.0	16.0	15.0	14.0	14.0	12.0	13.0	13.0
GARRISON -----											
ELEV FTMSL	1847.3	1847.4	1851.5	1852.2	1849.1	1845.7	1842.6	1840.0	1839.7	1838.4	1837.5
DISCH KCFS	14.9	43.0	49.0	49.0	46.0	43.0	38.0	37.7	19.0	25.0	25.0
OAHE -----											
ELEV FTMSL	1616.9	1616.3	1616.5	1615.6	1614.0	1612.0	1610.5	1608.4	1606.7	1606.9	1607.5
DISCH KCFS	26.0	50.0	52.6	54.1	52.5	54.1	45.9	48.6	27.6	23.5	22.7
BIG BEND -----											
ELEV FTMSL	1420.6	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0
DISCH KCFS	24.9	50.6	52.6	54.0	52.2	53.7	45.6	48.3	27.4	23.5	22.7
FORT RANDALL ----											
ELEV FTMSL	1359.0	1359.0	1359.0	1358.0	1355.2	1353.5	1345.0	1337.5	1339.3	1344.8	1350.0
DISCH KCFS	27.7	52.8	55.0	56.0	56.1	56.1	55.7	55.8	25.7	18.2	17.0
GAVINS POINT ----											
ELEV FTMSL	1205.3	1206.0	1206.0	1206.0	1206.5	1207.5	1207.5	1207.5	1207.5	1207.5	1206.0
DISCH KCFS	30.3	54.5	57.5	57.5	57.5	57.5	57.5	57.5	28.0	20.0	20.0
SYSTEM -----											
STORAGE 1000 AF	65497	65825	68542	68321	65822	63197	60477	58005	57153	56832	56812
ENERGY GWh	12861	1517	1497	1567	1543	1501	1422	1367	877	820	752
PEAK POWER MW		2377	2383	2386	2390	2381	2355	2290	2292	2313	2320

MAY 1, 2011 / LOWER BASIC / 38.8 MAF / BALANCED
 FULL SERV / NAV SEAS +10 DAYS / NO MAY PULSE

	30-Apr-11	31-May	2011 30-Jun	31-Jul	31-Aug	30-Sep	31-Oct	30-Nov	31-Dec	2012 31-Jan	29-Feb
FORT PECK -----											
ELEV FTMSL	2240.9	2241.9	2245.6	2245.3	2242.8	2240.9	2239.6	2238.3	2237.0	2235.4	2234.0
DISCH KCFS	7.1	18.0	17.0	16.0	14.0	11.3	9.0	9.0	9.0	11.0	11.0
GARRISON -----											
ELEV FTMSL	1847.3	1846.5	1849.9	1849.9	1846.8	1844.5	1843.2	1842.1	1840.8	1839.0	1837.5
DISCH KCFS	14.9	43.0	42.0	42.0	40.0	29.9	21.0	21.0	19.0	24.0	24.0
OAHE -----											
ELEV FTMSL	1616.9	1615.9	1616.0	1616.0	1615.7	1613.6	1611.4	1608.5	1607.4	1607.3	1607.5
DISCH KCFS	26.0	51.1	45.0	41.4	38.5	40.9	32.5	35.2	23.7	24.0	23.4
BIG BEND -----											
ELEV FTMSL	1420.6	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0
DISCH KCFS	24.9	51.7	45.0	41.2	38.1	40.3	32.1	34.8	23.5	24.0	23.4
FORT RANDALL ----											
ELEV FTMSL	1359.0	1359.0	1359.0	1358.5	1355.2	1353.5	1345.0	1337.5	1339.2	1344.8	1349.9
DISCH KCFS	27.7	53.5	46.8	42.2	42.5	42.5	42.1	42.2	21.8	18.6	17.5
GAVINS POINT ----											
ELEV FTMSL	1205.3	1206.0	1206.0	1206.0	1206.5	1207.5	1207.5	1207.5	1207.5	1207.5	1206.0
DISCH KCFS	30.3	54.5	49.0	43.5	43.5	43.5	43.5	43.5	23.5	20.0	20.0
SYSTEM -----											
STORAGE 1000 AF	65497	65091	67216	67071	65003	62927	60780	58764	57785	57160	56835
ENERGY GWh	11332	1528	1405	1395	1356	1244	1053	1029	768	811	744
PEAK POWER MW		2373	2381	2386	2400	2390	2366	2305	2299	2317	2320

MAY 1, 2011 / UPPER BASIC / 49.2 MAF / BALANCED
 FULL SERV / NAV SEAS +10 DAYS / NO MAY PULSE

	30-Apr-11	31-May	2011 30-Jun	31-Jul	31-Aug	30-Sep	31-Oct	30-Nov	31-Dec	2012 31-Jan	29-Feb
FORT PECK -----											
ELEV FTMSL	2240.9	2244.3	2250.0	2249.7	2246.1	2242.9	2240.1	2237.5	2236.3	2235.0	2234.0
DISCH KCFS	7.1	20.0	26.0	26.0	24.0	20.0	18.0	18.0	12.0	13.0	13.0
GARRISON -----											
ELEV FTMSL	1847.3	1848.0	1853.0	1854.0	1850.3	1846.2	1843.2	1840.9	1840.3	1838.7	1837.5
DISCH KCFS	14.9	48.5	61.5	61.5	61.5	54.2	44.0	42.1	22.0	28.0	28.0
OAHE -----											
ELEV FTMSL	1616.9	1616.1	1617.0	1616.9	1617.0	1615.4	1613.5	1610.8	1607.1	1607.1	1607.5
DISCH KCFS	26.0	57.4	62.2	62.4	59.4	63.8	55.7	58.2	41.2	27.8	27.1
BIG BEND -----											
ELEV FTMSL	1420.6	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0	1420.0
DISCH KCFS	24.9	58.0	62.2	62.3	59.1	63.5	55.5	58.1	41.0	27.8	27.1
FORT RANDALL ----											
ELEV FTMSL	1359.0	1362.0	1362.0	1360.0	1355.2	1353.4	1344.9	1337.4	1339.2	1344.7	1349.9
DISCH KCFS	27.7	56.4	65.1	66.0	66.2	66.2	65.8	65.8	39.5	22.6	21.6
GAVINS POINT ----											
ELEV FTMSL	1205.3	1206.0	1206.0	1206.0	1206.5	1207.5	1207.5	1207.5	1207.5	1207.5	1206.0
DISCH KCFS	30.3	58.5	68.0	68.0	68.0	68.0	68.0	68.0	42.0	25.0	25.0
SYSTEM -----											
STORAGE 1000 AF	65497	66549	70073	70143	67468	64622	61617	58911	57392	56924	56807
ENERGY GWh	13996	1597	1566	1629	1620	1572	1562	1478	1164	942	868
PEAK POWER MW		2348	2356	2374	2401	2394	2369	2300	2296	2314	2320

[REDACTED] NWO

From: Farhat, Jody S NWD02
Sent: Monday, May 09, 2011 2:33 PM
To: [REDACTED] NWD02; [REDACTED] NWO
Subject: RE: Garrison Releases (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: FOUO

I think there's value in a pause if Todd agrees. Bismarck is already at 10.5 feet. Might be good to hold the 44 on Wednesday and then slowly step up to the 49 release. We don't want any surprises. Is there an issue making gate changes over the weekend?

Jody

-----Original Message-----

From: [REDACTED] NWD02
Sent: Monday, May 09, 2011 2:25 PM
To: [REDACTED] NWO; Farhat, Jody S NWD02
Subject: RE: Garrison Releases (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: FOUO

[REDACTED]
We have 44,000 cfs scheduled for tomorrow, which is a 3,000 cfs increase. On the forecast we showed slowing the increases down after that, although we still had 46 for Wednesday, 48 on Thursday and 49 on Friday. We can definitely stay on any of those releases for an extra day or two if necessary.

Jody, any thoughts?

Mike

-----Original Message-----

From: [REDACTED] NWO
Sent: Monday, May 09, 2011 2:02 PM
To: Farhat, Jody S NWD02; [REDACTED] NWD02
Subject: Garrison Releases (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: FOUO

All,
I see that we are going to 44,000 cfs daily average releases from Garrison tomorrow. During previous conversations, I was told that we'd likely "Take a pause" in increases once we got to the mid 40,000 cfs releases, in order to assess the impacts downstream. Is that still the plan?

[REDACTED]
Operations Project Manager
Garrison Project

NWO

From: [REDACTED] NWO
Sent: Friday, May 06, 2011 1:20 PM
To: Farhat, Jody S NWD02
Cc: [REDACTED] M NWO
Subject: RE: Garrison Press Release (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Until we stabilize releases we're going to make the fisherman on the river unhappy. We are creating a tremendous amount of debris in the river with each stage increase...

-----Original Message-----

From: Farhat, Jody S NWD02
Sent: Friday, May 06, 2011 12:41 PM
To: [REDACTED] NWO
Cc: [REDACTED] M NWO
Subject: RE: Garrison Press Release (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Thanks for the quick turnaround! And I think your plan for a separate release on the wingwalls is great. I don't know what the situation at Garrison will be, but last year I heard fishing below the Oahe tunnel releases was phenomenal.

Jody

-----Original Message-----

From: [REDACTED] NWO
Sent: Friday, May 06, 2011 12:16 PM
To: Farhat, Jody S NWD02
Cc: [REDACTED] NWO
Subject: RE: Garrison Press Release (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Jody,

I've made a few minor edits. Per conversation with [REDACTED], go ahead and have Omaha do this press release and we'll also issue another one locally which specifically addresses access to the wing-walls. This is a very popular fishing access point so we feel it warrants a separate press release. We'll take care of that one out of our office.

Thanks for your assistance in getting this one out!

[REDACTED]

-----Original Message-----

From: Farhat, Jody S NWD02
Sent: Friday, May 06, 2011 11:29 AM
To: [REDACTED] NWO
Subject: Garrison Press Release (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

For your review and edits. We'd like to get this sent out early this afternoon.

Thanks,
Jody

Jody Farhat, P.E.
Chief, Missouri River Basin Water Management

jody.s.farhat@usace.army.mil
Office: 402-996-3840
Cell: 402-350-1417
Home: 402-551-6013

Classification: UNCLASSIFIED
Caveats: NONE

Classification: UNCLASSIFIED
Caveats: NONE

Classification: UNCLASSIFIED
Caveats: NONE

Classification: UNCLASSIFIED
Caveats: NONE

[REDACTED] NWO

From: Farhat, Jody S NWD02
Sent: Friday, May 06, 2011 12:24 PM
To: Farmer, Monique L NWO
Cc: Farhat, Jody S NWD02; [REDACTED] NWD02; [REDACTED] NWD02
Subject: 3 Press releases (UNCLASSIFIED)
Attachments: NR050411.docx; NR050411d-Garrison.docx; NR050411c-FortPeck.docx

Classification: UNCLASSIFIED
Caveats: NONE

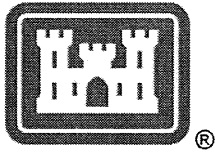
Monique - here are the press releases. As always, thanks for your help!

Jody

Jody Farhat, P.E.
Chief, Missouri River Basin Water Management

jody.s.farhat@usace.army.mil
Office: 402-996-3840
Cell: 402-350-1417
Home: 402-551-6013

Classification: UNCLASSIFIED
Caveats: NONE



U.S. ARMY CORPS OF ENGINEERS

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NEWS RELEASE

For Immediate Release: July 2, 2011~~May 6, 2011~~

Contact: Monique Farmer - (402) 995-2420
monique.l.farmer@usace.army.mil

Jody Farhat – (402) 996-3840

Corps increases Missouri River reservoir releases

OMAHA, Neb. – Releases from the Missouri River mainstem reservoirs are being increased to speed the evacuation of stored flood waters.

“Based on the current forecast, 2011 has the potential to be the second highest runoff season in our 113 years of record keeping,” said Jody Farhat said Chief of the Water Management Division here. “As a result of the volume of water we have already seen come into the system, as well as the much above normal runoff anticipated from the mountain snowpack, releases out of Gavins Point dam will be increased to 57,500 cfs in May”.

The Corps expects to maintain those higher releases out of Gavins Point through December to allow for the continued evacuation of stored floodwater through the end of the year. Releases from the upstream reservoirs will also be increased as water is moved through the entire system. These higher releases will necessitate use of the regulating tunnels or spillways at 5 of the 6 mainstem dams. Only Big Bend dam in South Dakota has sufficient powerplant capacity to meet the release requirement.

Since the start of the runoff season more than 8.5 million acre feet (MAF) of flood water has been stored in the reservoir system. “To put that into perspective, the total amount of flood water stored in 2010 was 9 MAF”, said Jody Farhat, Chief of the Water Management Division here. Runoff into the mainstem reservoir system during April was 5.6 MAF, more than twice the monthly normal.

Normally, the mountain snowpack peaks in mid-April, however this year it continued to accumulate into early May. Although it appears to have peaked recently at 141 percent of normal in the reach above Fort Peck and 136 percent of normal in the reach between Fort Peck and Garrison, cool weather coupled with additional snow could push those figures even higher.

“With so much water coming into the system, our flexibility to reduce releases for downstream runoff events will be somewhat limited between now and December,” Farhat said. “Our goal is to evacuate the water as quickly and safely as possible so that we are ready for the next flood event. Public safety is our number one concern.”

Runoff for 2011 is forecast to total 44 MAF, 178 percent of normal. The 2010 total was 38.8 MAF, 156 percent of normal. The highest runoff season on record occurred in 1997 with 49.0 MAF, 198% of normal.

-more-

During any flood response activities throughout the basin, the Corps will provide regular updates directly to the public via its Facebook (www.facebook.com/OmahaUSACE) and Twitter accounts (www.twitter.com/OmahaUSACE).

[Type text]

Gavins Point releases averaged 30,300 during the month of April. The long-term average for Gavins during this time of year is 24,800. Releases will be increased from 45,000 cfs to 57,500 cfs in early May. The reservoir will rise slightly to elevation 1206 during the month.

Fort Randall reservoir rose 1.2 feet in April, ending the month near elevation 1359. It is expected to remain essentially level in May. It is currently 3 feet higher than it was last year at this time. Releases from Fort Randall will increase to near 55,000 cfs in early May to correspond with the Gavins Point flow increases.

Big Bend reservoir will remain in its normal range of 1420 to 1421 feet. Releases will be adjusted to meet hydropower needs.

Oahe reservoir rose 2.5 feet in April, ending the month at elevation 1616.9 feet. It is expected to drop slightly during May, ending the month near elevation 1616.3. The reservoir's elevation is 0.8 feet higher than it was last year at this time. Oahe releases averaged 24,000 cfs in April.

Garrison reservoir rose 6.8 feet in April, ending the month at elevation 1847.3. The reservoir will remain essentially level in May, ending the month near elevation 1847.4. The reservoir is 8.2 feet higher than it was a year ago at this time. Garrison releases were increased from 15,000 cfs to 29,000 cfs in late April and early May. Releases will continue to be gradually increased and will reach 49,000 cfs by mid-May.

Fort Peck rose by 2.2 feet in April, ending the month at elevation 2240.9. It is expected to increase by more than 2 feet in May, ending the month near elevation 2243. The reservoir is currently 16 feet higher than it was a year ago at this time. Fort Peck was the last of the mainstem dams to recover from the drought. The reservoir, which had been low since 1999, finally reached the normal operating level in July 2010. Fort Peck releases averaged 7,100 cfs during April. They will be gradually increased to 20,000 cfs during the month of May.

The six main stem power plants generated 779 million kilowatt hours (kWh) of electricity in April, 114 percent of normal. The total energy production forecast for 2011 anticipates above average production at 14.1 billion kWh. The long-term average is approximately 10 billion kWh.

View daily and forecasted reservoir and river information on the Water Management section of the Northwestern Division homepage at: <http://www.nwd-mr.usace.army.mil/rcc>.

Other links of interest:

- <http://www.nwo.usace.army.mil/html/op-e/flood.html>
- www.facebook.com/OmahaUSACE
- www.twitter.com/OmahaUSACE
- www.mraps.org
- www.moriverrecovery.org

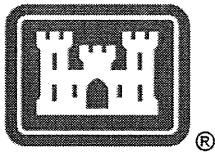
-more-

MISSOURI RIVER MAIN STEM RESERVOIR DATA

	Pool Elevation (ft msl)		Water in Storage - 1,000 acre-feet		
	On April 30	Change in April	On April 30	% of 1967-2010 Average	Change in April
Fort Peck	2240.9	+2.2	16,292	115	+489
Garrison	1847.3	+6.8	21,349	126	+2,300
Oahe	1616.9	+2.5	21,990	121	+897
Big Bend	1420.6	+0.1	1,658	96	+7
Fort Randall	1359.0	+1.2	3,882	99	+112
Gavins Point	1205.3	-1.2	326	87	-28
			65,497	118	+3,777

WATER RELEASES AND ENERGY GENERATION FOR APRIL

	Average Release in 1,000 cfs	Releases in 1,000 af	Generation in 1,000 MWh
Fort Peck	7.1	421	69
Garrison	14.9	884	138
Oahe	26.0	1,550	241
Big Bend	24.9	1,479	85
Fort Randall	27.7	1,648	174
Gavins Point	30.3	1,805	72
			779



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NEWS RELEASE

For Immediate Release: July 2, 2011~~May 6, 2011~~

Contact: Monique Farmer - (402) 995-2420
monique.l.farmer@usace.army.mil

Jody Farhat – (402) 996-3840
Todd Lindquist – (701) 654-7411, X-207

Corps plans increased releases out of Garrison Reservoir

Omaha, Neb. – The U.S. Army Corps of Engineers Water Management Division announced today that it plans to gradually increase releases out of Garrison Reservoir this month.

“The reservoir ended the month at the highest end-of-April level since the spring of 1997,” said Jody Farhat, Chief of the Water Management Division here. “Higher release rates are necessary to evacuate water already stored in the reservoir from the melt of the plains snowpack and runoff that is yet to come from the mountain snowpack.”

Normally, the mountain snowpack peaks in mid-April, however this year it continued to accumulate into early May. Although it appears to have peaked recently at 141 percent of normal in the reach above Fort Peck and 136 percent of normal in the reach between Fort Peck and Garrison, cool weather coupled with additional snow could push those figures even higher.

The Corps plans to gradually increase releases from the current rate of 32,000 cfs to 49,000 cubic feet per second by mid-May. Releases will remain at that rate through June and July.

Increased releases are necessary as the reservoir currently sits approximately 2 feet from its exclusive flood control zone. The exclusive flood control zone, which extends from elevation 1850 feet to the top of the spillway gates at elevation 1854 feet, is maintained exclusively for flood control. Water is released from this zone as quickly as downstream channel conditions permit so that sufficient storage remains available for capturing future inflows. Garrison reservoir is expected to crest this summer 2 feet into the exclusive flood control zone at elevation 1852 feet. The top of the dam is at 1875 feet.

With all the generating units available the release capacity of the powerplant is 41,000 cfs. Currently, on-going maintenance efforts are limiting the releases to 30,000 cfs through powerplant. The regulatory tunnels will be used for releases above powerplant capacity. The Garrison regulatory tunnels have not been used since 1997. Due to the need to release water through the regulatory tunnels, access to the wing walls will be closed for public safety.

“We haven’t experienced releases this high in more than a decade so the public will need to be cautious in and around the river,” said Todd Lindquist, Operations Manager at Garrison. “The stage at Bismarck will rise approximately 3 more feet. Once the releases reach higher rates, minimal fluctuations in daily stages are expected but there is still a high potential for bank erosion adjacent to the river. For anglers and boaters, the higher inflows will raise the reservoir level an additional 4 feet. It will remain at above normal levels throughout the summer.”

Garrison reservoir rose 6.8 feet in April, ending the month at elevation 1847.3 feet. The reservoir will maintain a fairly consistent level in May, ending the month near elevation 1847.4 feet. The reservoir is 8.2 feet higher than it was a year ago at this time.

[Type text]

Similar conditions are being experienced throughout the mainstem reservoir system. Three other Corps' dams on the Missouri River (Fort Peck, Oahe and Fort Randall) have significant volumes of flood water to evacuate, and all six mainstem reservoirs will see much higher releases in the coming days. The other two Corps' dams on the Missouri River (Big Bend and Gavins Point) have little to no flood control storage and essentially pass inflow. "Our goal is to evacuate the water as quickly and as safely as possible so that we are ready for the next flood event," Farhat said. "Public safety is our number one concern."

During any flood response activities throughout the basin, the Corps will provide regular updates directly to the public via its Facebook (www.facebook.com/OmahaUSACE) and Twitter accounts (www.twitter.com/OmahaUSACE).

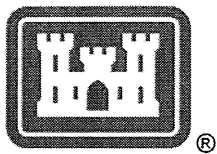
-more-

View daily and forecasted reservoir and river information on the Water Management section of the Northwestern Division homepage at: <http://www.nwd-mr.usace.army.mil/rcc>.

Other links of interest:

- <http://www.nwo.usace.army.mil/html/op-e/flood.html>
- www.facebook.com/OmahaUSACE
- www.twitter.com/OmahaUSACE
- www.mraps.org
- www.moriverrecovery.org

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NEWS RELEASE

For Immediate Release: July 2, 2011~~May 6, 2011~~

Contact: Monique Farmer - (402) 995-2420
monique.l.farmer@usace.army.mil

Jody Farhat – (402) 996-3840
Jon Daggett – (406) 526-3411, x-4274

Corps plans increased releases out of Fort Peck Reservoir

Omaha, Neb. – The U.S. Army Corps of Engineers Water Management Division announced today that it plans to gradually increase releases out of Fort Peck Reservoir this month.

“The reservoir ended the month at the highest end-of-April level since the spring of 1996,” said Jody Farhat, Chief of the Water Management Division here. “Higher release rates are necessary to evacuate water already stored in the reservoir from the melt of the plains snowpack and runoff that is yet to come from the above normal mountain snowpack.”

Normally, the mountain snowpack peaks in mid-April, however this year it continued to accumulate into early May. Although it appears to have peaked recently at 141 percent of normal in the reach above Fort Peck and 136 percent of normal in the reach between Fort Peck and Garrison, cool weather coupled with additional snow could push those figures even higher.

The Corps plans to gradually increase releases from Fort Peck from the current rate of 9,000 cfs to 20,000 cfs by mid-May. Releases will remain at that rate through June and July.

Increased releases are necessary as the reservoir level is currently less than 5 feet from its exclusive flood control zone. The exclusive flood control zone, which extends from elevation 2246 feet to the top of the spillway gates at elevation 2250 feet, is maintained exclusively for flood control. Water is released from this zone as quickly as downstream channel conditions permit so that sufficient storage remains available for capturing future inflows. Fort Peck reservoir is expected to crest this summer 2 feet into the exclusive flood control zone at elevation 2248 feet. The top of the dam is at 2280.5 feet.

When all the generating units and transmission facilities are available, the release capacity of the powerplant is 15,000 cfs. However, current on-going maintenance efforts are limiting releases to approximately 10,000 cfs through the powerplant. Releases above the powerplant capacity will be made through the spillway. The Fort Peck spillway has not been used since 1997.

“We haven’t experienced releases this high in more than a decade so the public will need to be cautious in and around the river. There is also the potential for bank erosion adjacent to the river,” said John Daggett, Fort Peck Operations Manager.

Daggett also advised irrigators to monitor irrigation pumps regularly as changes in releases may affect pump intakes. “As releases are increased, the stages on the river below Fort Peck are expected to rise several feet. However, once they reach the desired rate only minimal fluctuations in daily stages are expected.”

Fort Peck rose by 2.2 feet in April, ending the month at elevation 2240.9. It is expected to increase by 2.2 feet in May, ending the month near elevation 2243. The reservoir is currently 16 feet higher than it

U.S. Army Corps of Engineers – Omaha District 1616 Capitol Ave., Omaha, Neb. 68102

<http://www.nwo.usace.army.mil/>

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[Type text]

was a year ago at this time. Fort Peck was the last of the Corps' mainstem dams to recover from the drought. The reservoir, which had been low since 1999, reached the normal operating level in July 2010.

Similar conditions are being experienced throughout the mainstem reservoir system. Three other Corps' dams on the Missouri River (Garrison, Oahe and Fort Randall) have significant volumes of flood water to evacuate, and all six mainstem reservoirs will see much higher releases in the coming days. The other two Corps' dams on the Missouri River (Big Bend and Gavins Point) have little to no flood control storage and essentially pass inflow. "Our goal is to evacuate the water as quickly and as safely as possible so that we are ready for the next flood event," Farhat said. "Public safety is our number one concern."

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Other links of interest:

- <http://www.nwo.usace.army.mil/html/op-e/flood.html>
- www.facebook.com/OmahaUSACE
- www.twitter.com/OmahaUSACE
- www.mraps.org
- www.moriverrecovery.org

NWO

From: Farmer, Monique L NWO
Sent: Friday, May 06, 2011 12:23 PM
To: Farhat, Jody S NWD02
Cc: 'Gaarder, Nancy'
Subject: FW: Missouri River (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Nancy:

Jody is in the office now and will be calling you soon at 444-1102.

Monique

-----Original Message-----

From: Gaarder, Nancy [<mailto:Nancy.Gaarder@owh.com>]
Sent: Friday, May 06, 2011 12:19 PM
To: Farmer, Monique L NWO
Subject: RE: Missouri River (UNCLASSIFIED)

Monique,

I haven't tracked this issue at all, so I'm behind the times.....I'm interested in the basics..which may be covered by one of your earlier releases?

- How current releases compare to normal for this time of year?
- How far into summer the Corps expects to have elevated releases and if there is a schedule for greater or lesser releases?
- How unusual the snowpack/rain has been upstream and how that's stressing the system?
- How helpful lack of rain along our stretch of the Missouri River basin has been?
- Whether you've had to modify releases because of Miss. Flooding?
- Ongoing projected Neb./Iowa impacts of flooding -- (NP Dodge Park, Haworth park, etc.)

I had an interesting conversation with a birder who says these high waters have been great for migratory birds. He says that all the Corps' work creating habitat is paying off -- especially this year because of the higher water.....is that something the Corps is noticing?

Thank you Monique, does this help?

Nancy

Omaha World-Herald
www.omaha.com

Nancy Gaarder
Reporter

Office: 402-444-1102
Fax: 402-444-1231
Email: Nancy.Gaarder@owh.com
1314 Douglas St.- Suite 700
Omaha, NE 68102

-----Original Message-----

From: Farmer, Monique L NWO [<mailto:Monique.L.Farmer@usace.army.mil>]
Sent: Friday, May 06, 2011 11:44 AM
To: Gaarder, Nancy
Subject: RE: Missouri River (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Hey Nancy:

What are your questions? Several of the WM folks are in meetings much of the day. I can try to help you out. Also, there has not been anything posted to FB re: releases during the past week as we are in the process of developing the news release. But, I still encourage you to follow us on FB. Feel free to call if you ever need help navigating. You'll get used to it in no time!

Monique

-----Original Message-----

From: Gaarder, Nancy [<mailto:Nancy.Gaarder@owh.com>]
Sent: Friday, May 06, 2011 11:33 AM
To: Farmer, Monique L NWO; Wingert, Kevin M NWO
Subject: Missouri River

Monique, Kevin,

Would someone be available today to talk about releases along the Missouri River? I continue to get calls about high water along the river.....

In the meantime, I'll peruse your facebook page for press releases, etc., about releases.....this social networking is a new thing for me...

Thank you,

Nancy

Omaha World-Herald
www.omaha.com <<http://www.omaha.com/>>

Nancy Gaarder

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1314 Douglas St.- Suite 700
Omaha, NE 68102

Classification: UNCLASSIFIED
Caveats: NONE

Classification: UNCLASSIFIED
Caveats: NONE

NWO

From: [REDACTED] NWO
Sent: Friday, May 06, 2011 11:48 AM
To: Farhat, Jody S NWD02
Cc: [REDACTED] NWO
Subject: RE: Fort Peck Press Release for your quick review. (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Jody, I think this covers everything very well!

-----Original Message-----

From: Farhat, Jody S NWD02
Sent: Friday, May 06, 2011 11:23 AM
To: [REDACTED] NWO; [REDACTED] NWO
Subject: Fort Peck Press Release for your quick review. (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Please let me know asap if you have any edits you would like to make to this press release.
We would like it to go out early this afternoon.

Thanks,
Jody

Jody Farhat, P.E.
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Classification: UNCLASSIFIED
Caveats: NONE

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